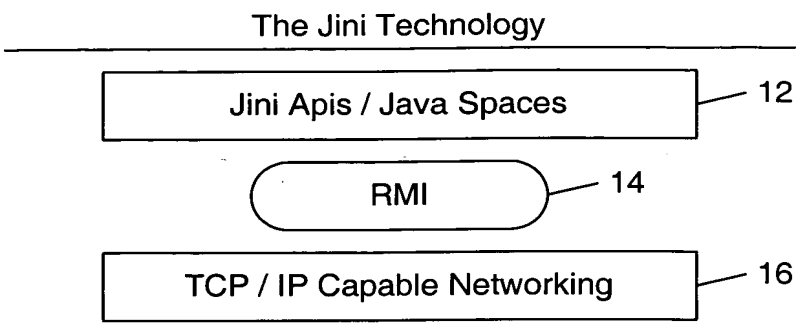


Fig. 1
(Prior Art)

5656356 .05656

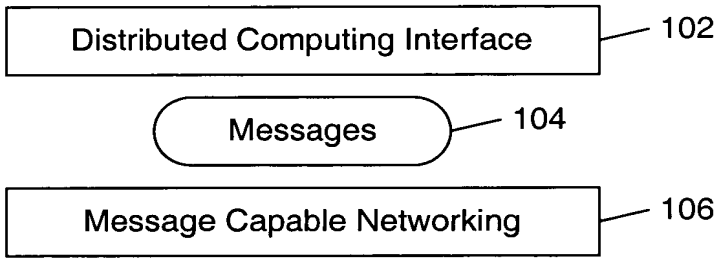


Fig. 2

Docket: 5050-0150

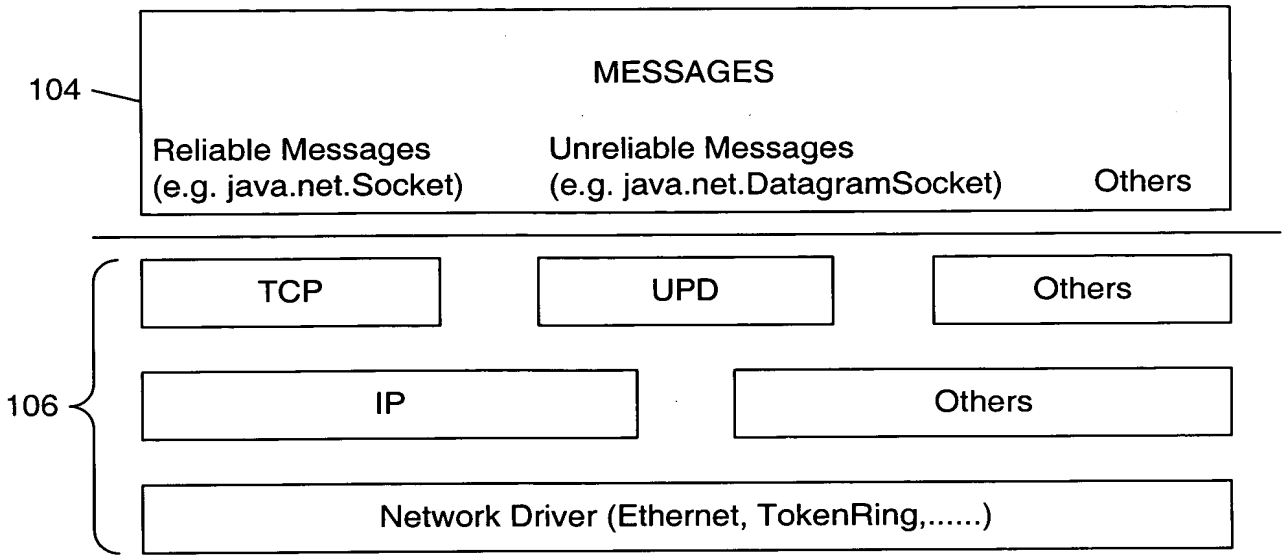


Fig. 3

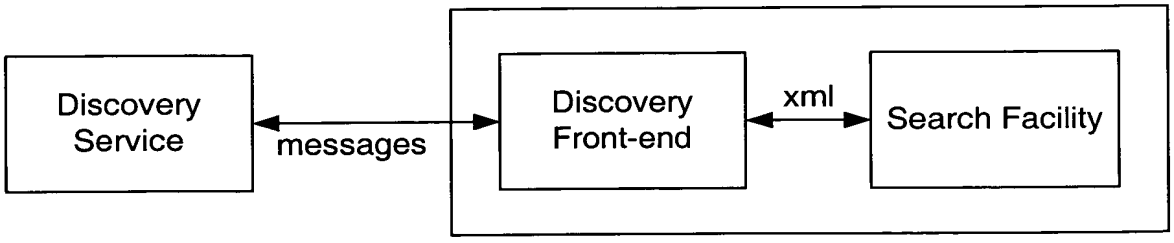


Fig. 4

050503.0504

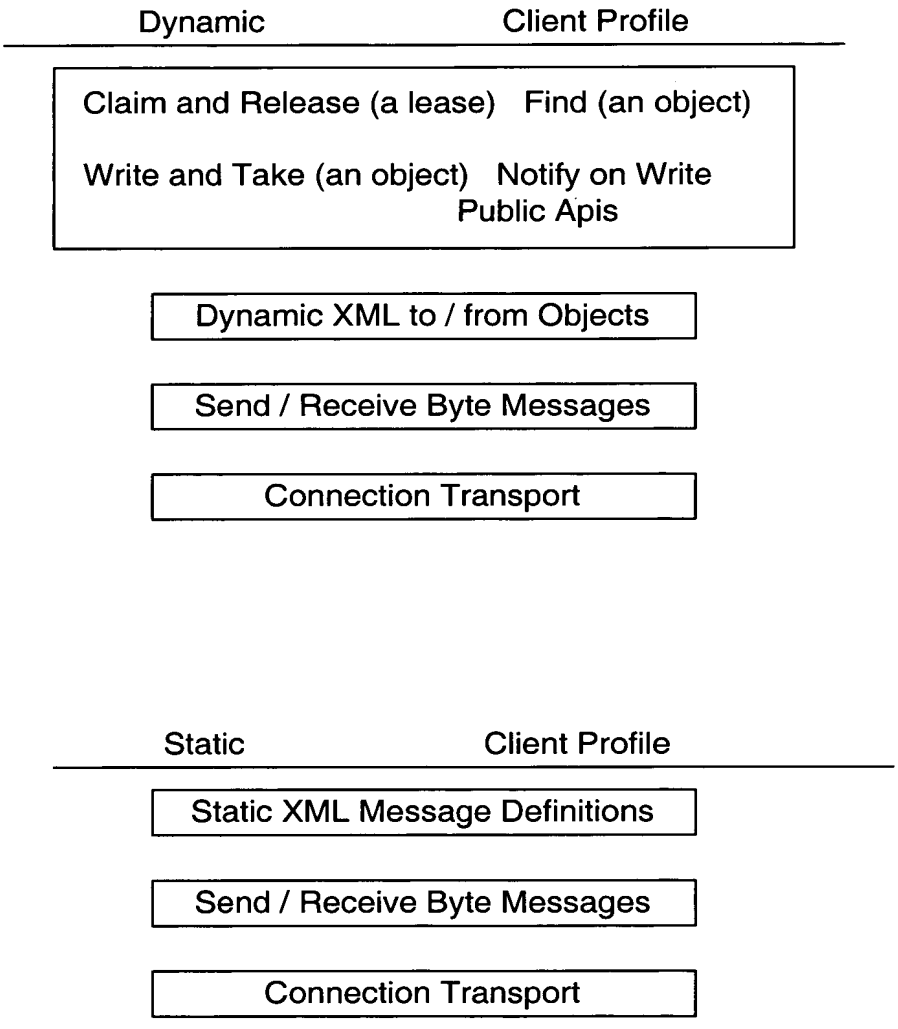


Fig. 5

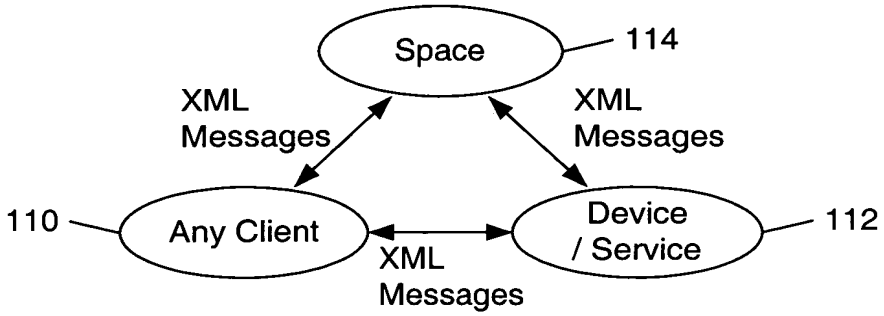

Space
114
XML
Messages
XML
Messages
110
Any Client
Device
/ Service
112
XML
Messages

Fig. 6

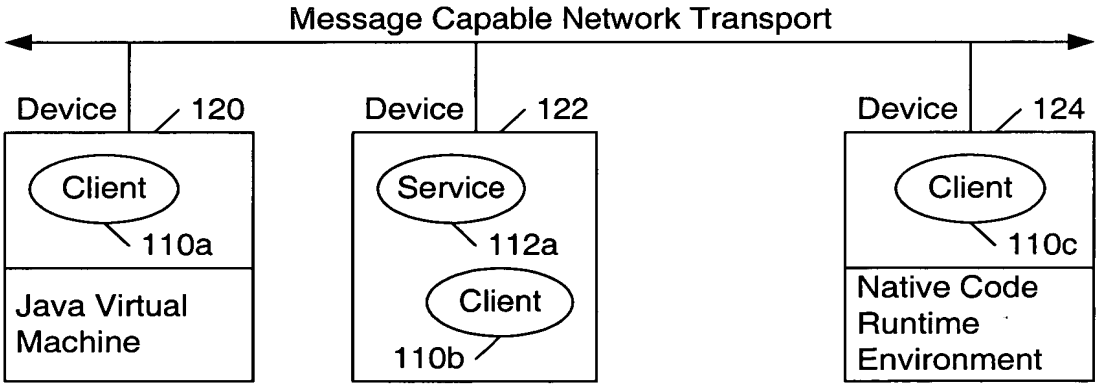

Message Capable Network Transport
Device
120
Client
110a
Java Virtual
Machine
Device
122
Service
112a
Client
110b
Device
124
Client
110c
Native Code
Runtime
Environment

Fig. 7

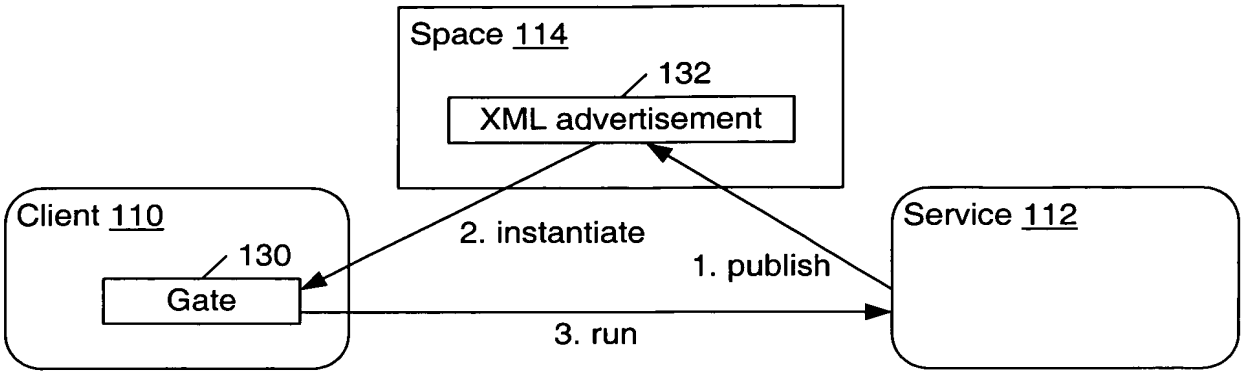


Fig. 8

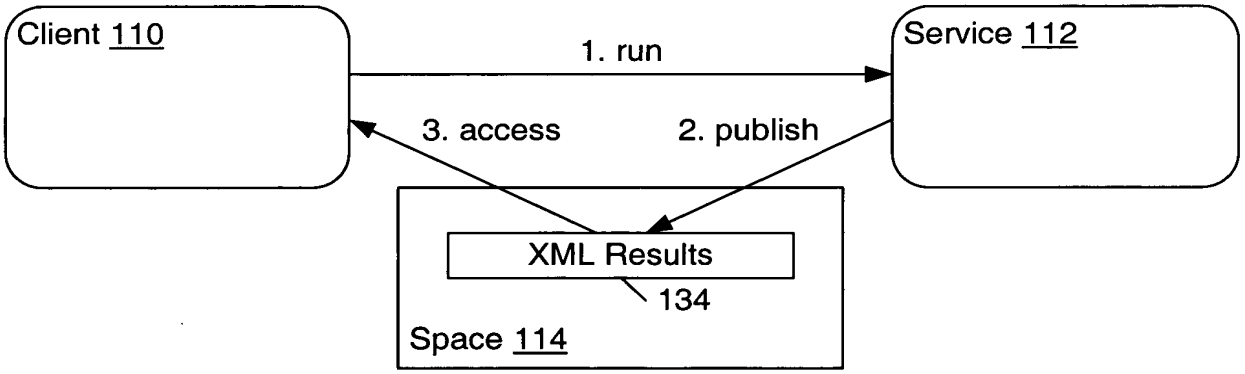


Fig. 9

Docket No. 50325-0805

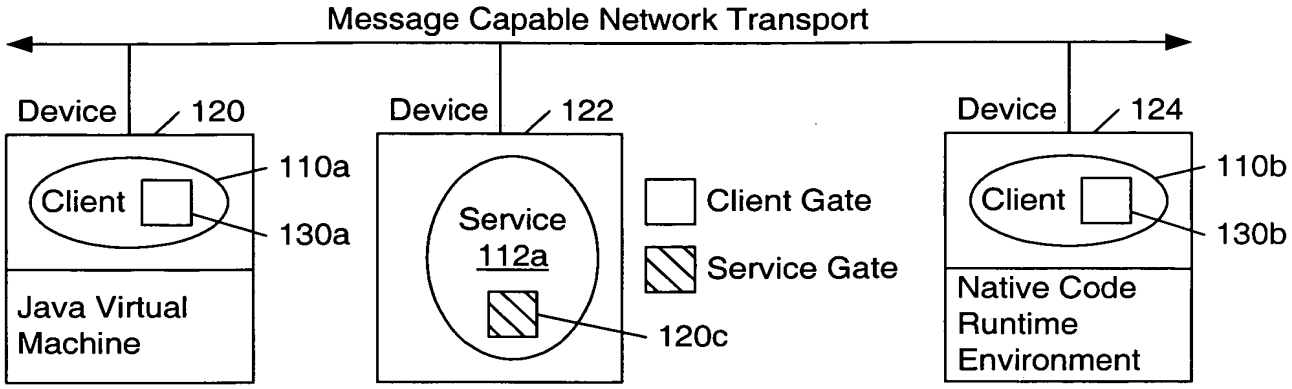


Fig. 10a

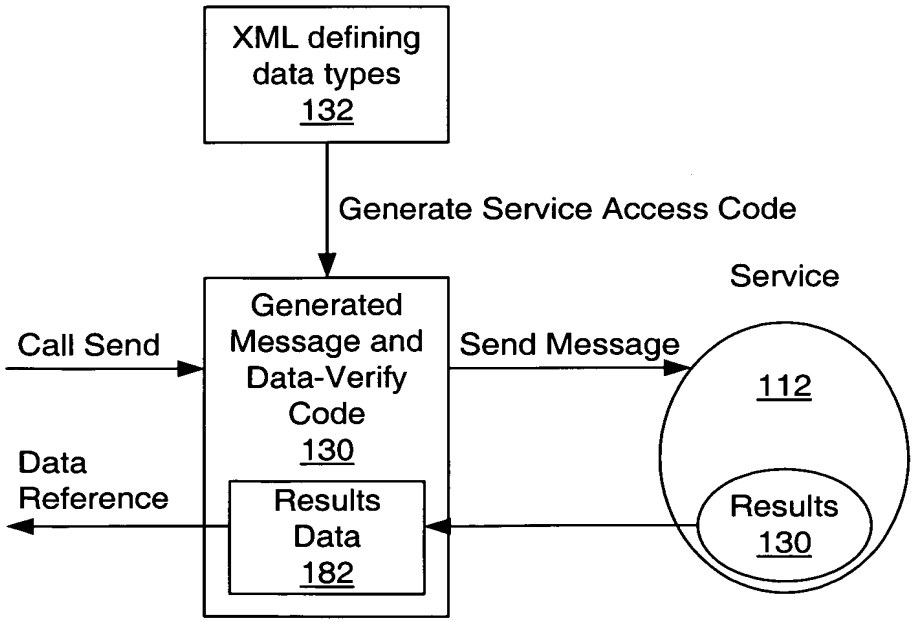


Fig. 10b

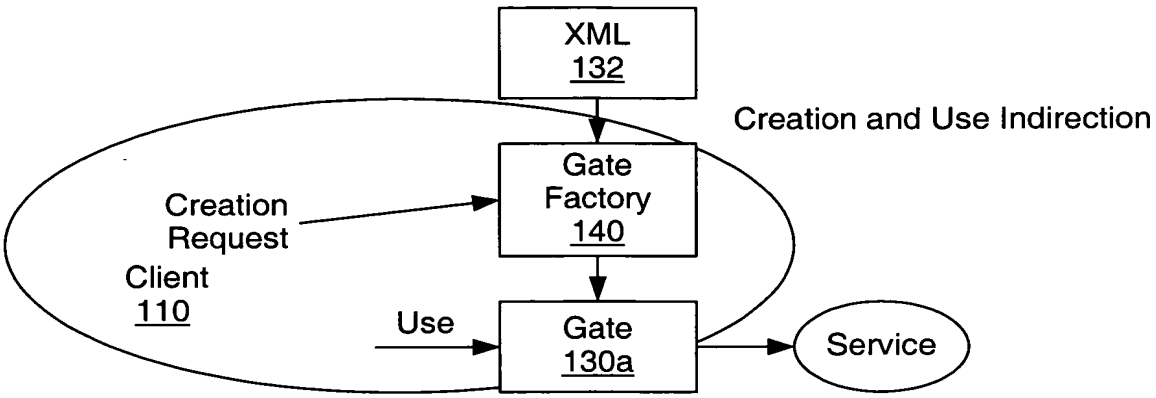


Fig. 11a

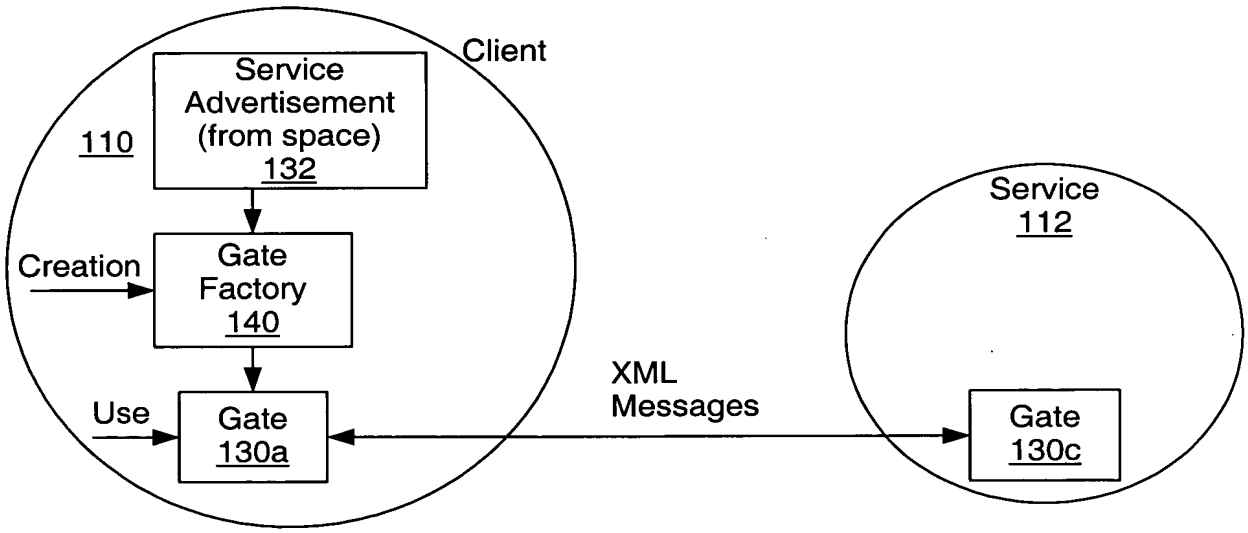


Fig. 11b

0605350.0450

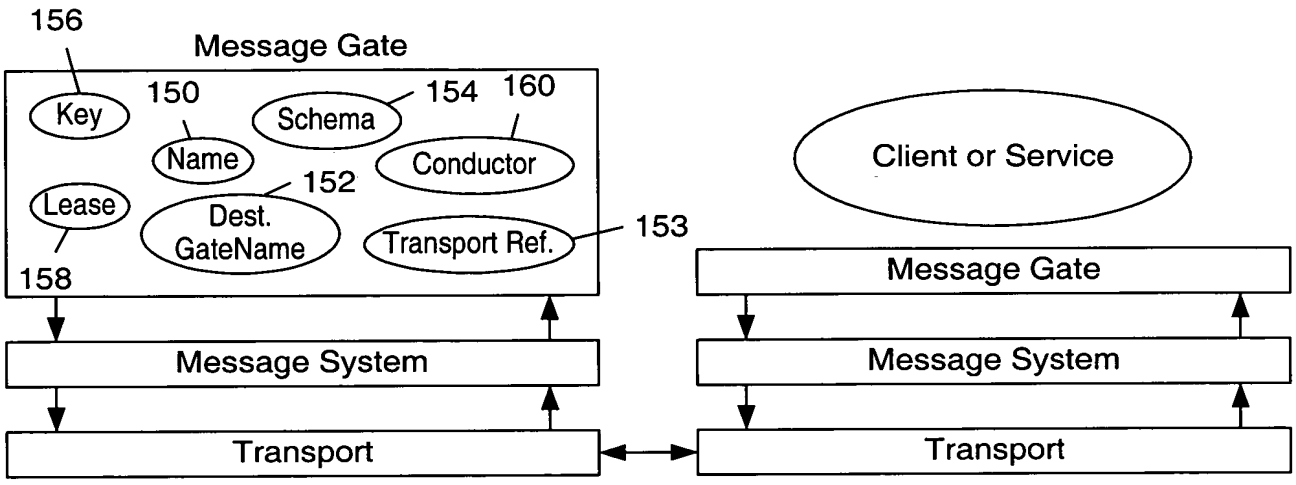

156
Message Gate
Key
150
Schema
154
160
Name
Conductor
152
Lease
Dest.
GateName
Transport Ref.
153
158
Client or Service
Message Gate
Message System
Message System
Transport
Transport

Fig. 12

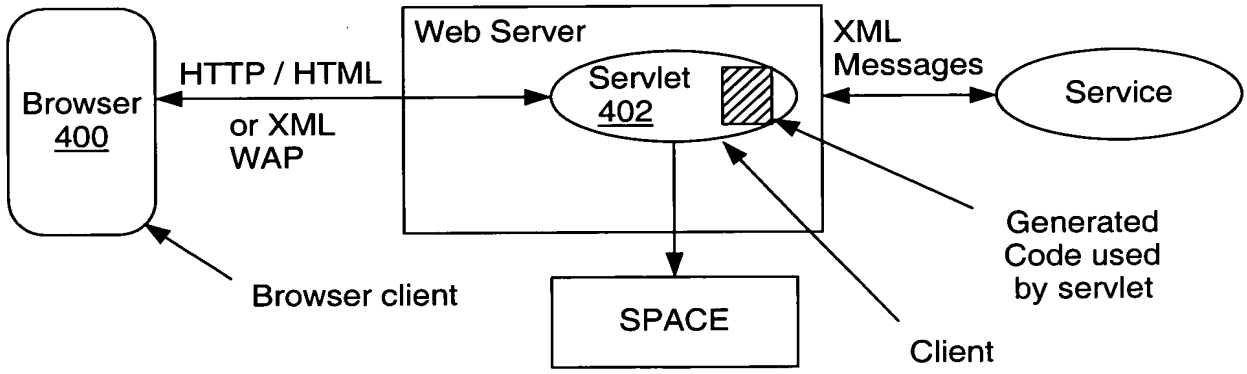

Web Server
XML
Messages
Browser
400
HTTP / HTML
or XML
WAP
Servlet
402
Service
Generated
Code used
by servlet
Browser client
SPACE
Client

Fig. 13

Docket No. 50277-2350

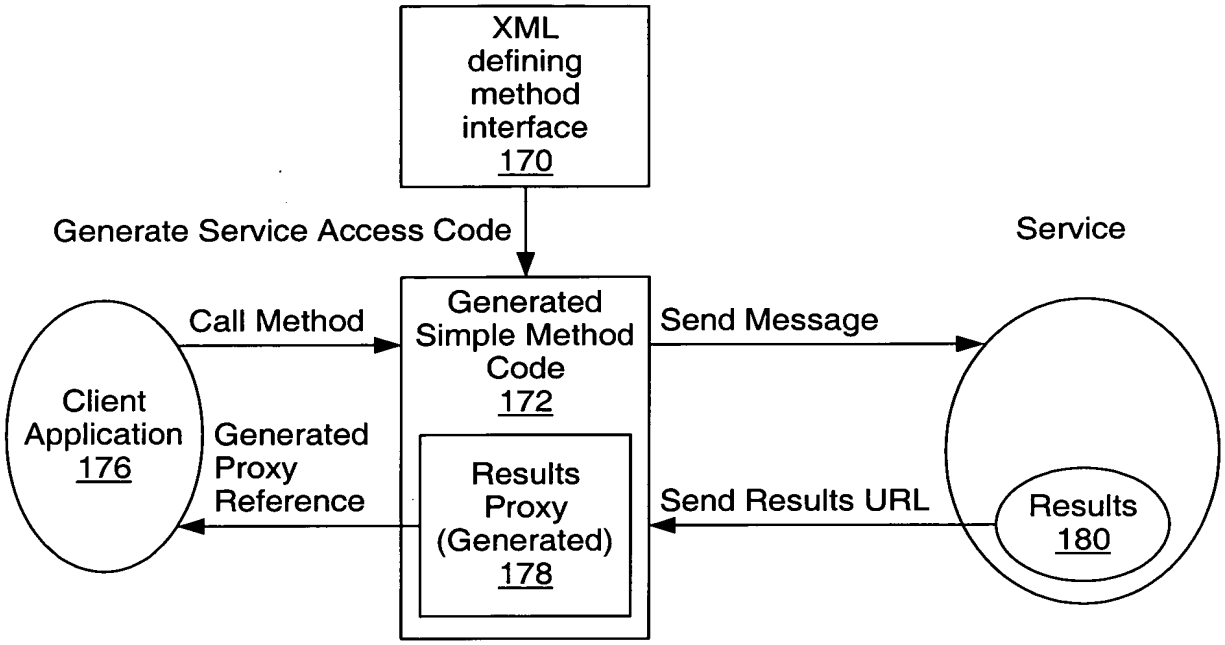


Fig. 14

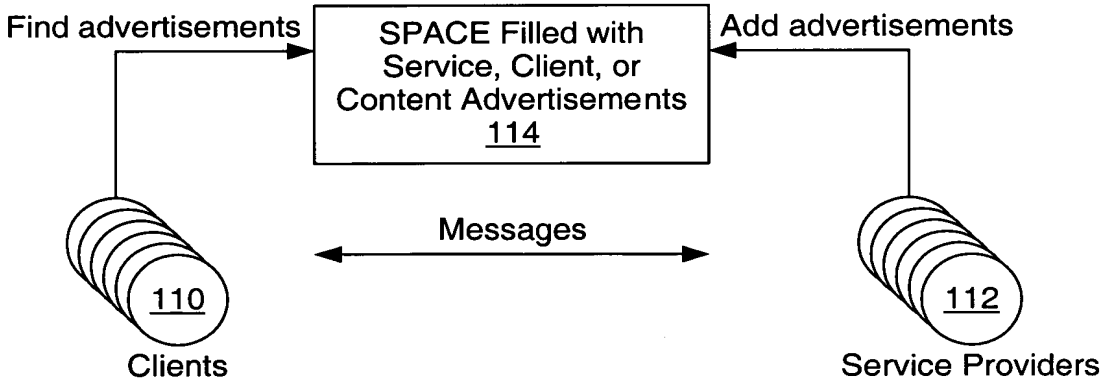


Fig. 15

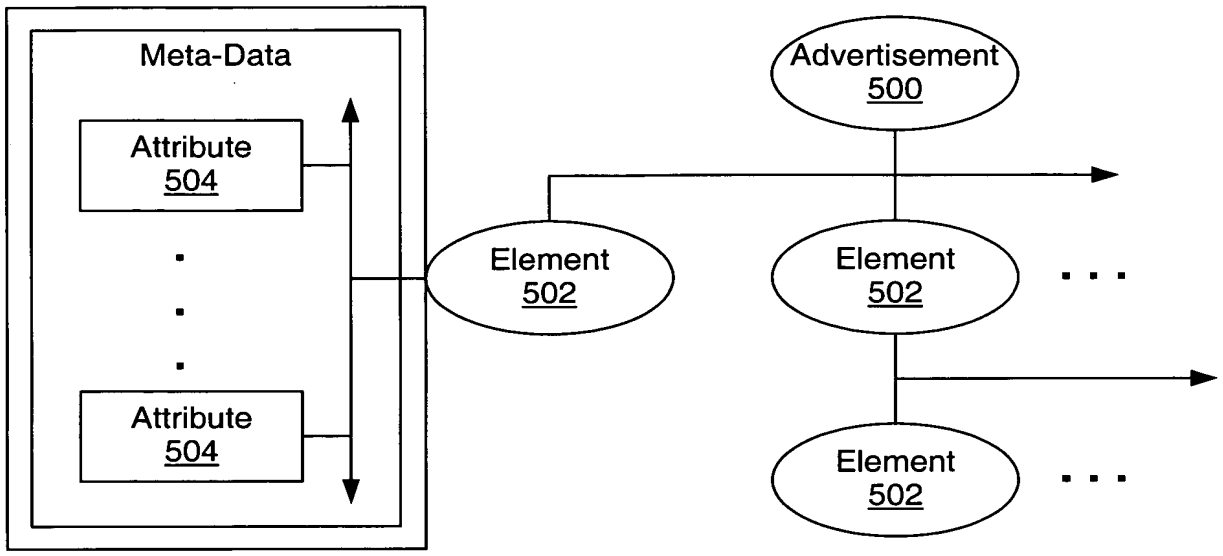

Meta-Data
Attribute
504
Attribute
504
Advertisement
500
Element
502
Element
502
Element
502

Fig. 16

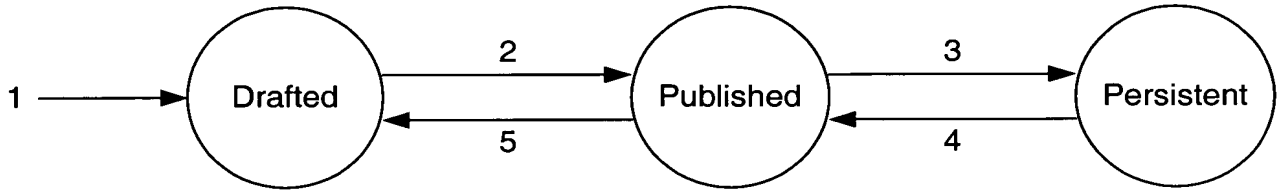

1
Drafted
2
5
Published
3
4
Persistent

Fig. 17

00STGD" E9SE9960

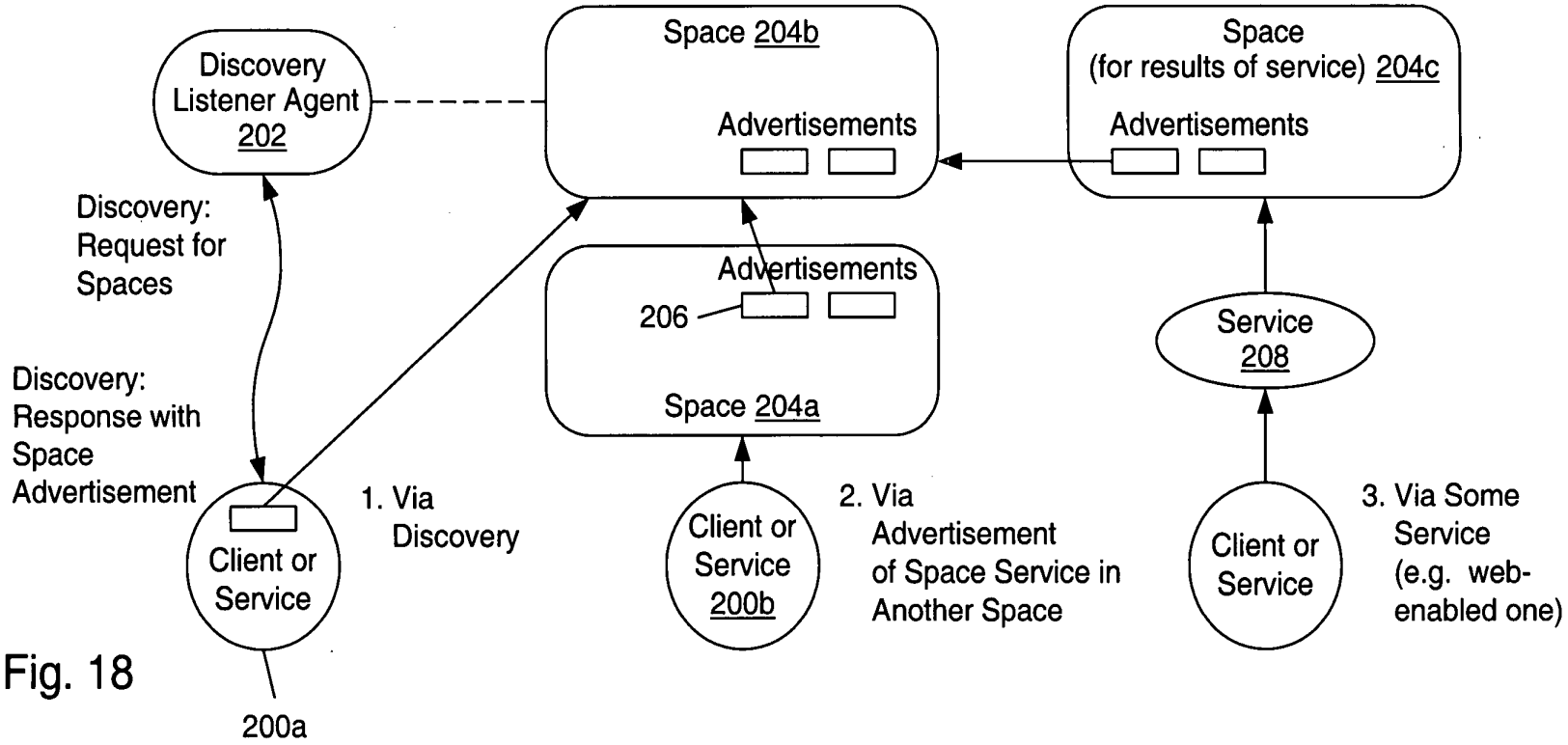


Fig. 18

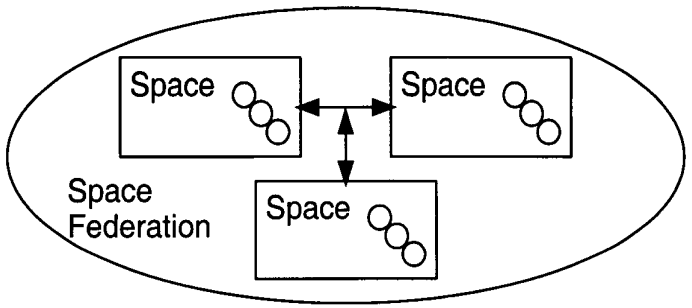


Fig. 19

05655603.050400

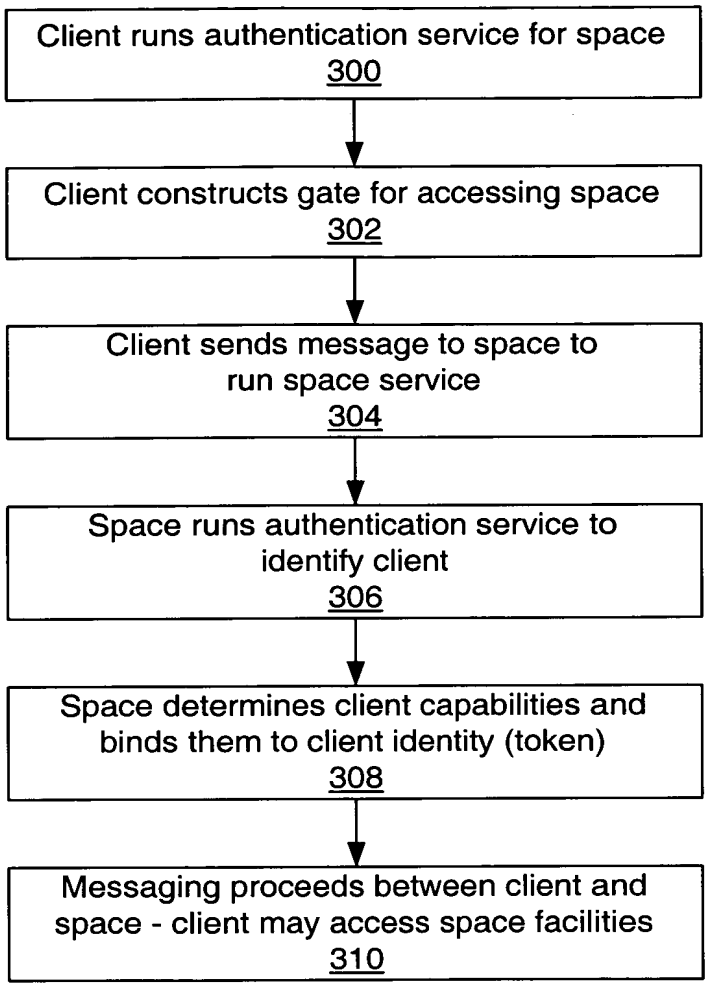


Fig. 20

00S760" E95E9960

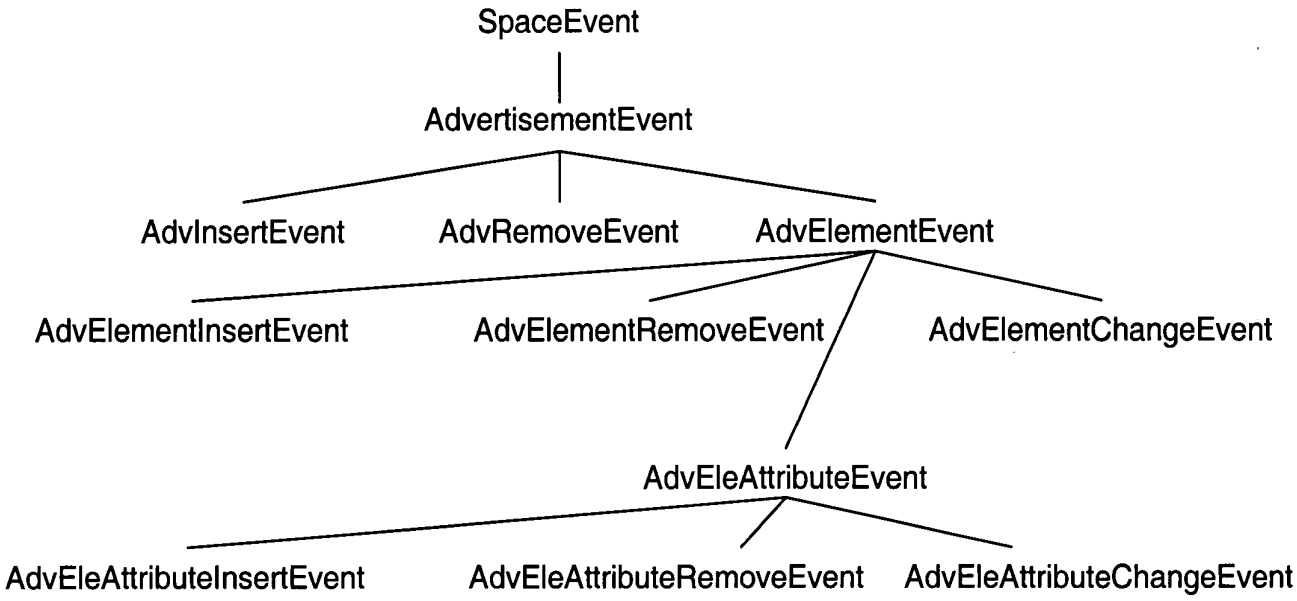


Fig. 21

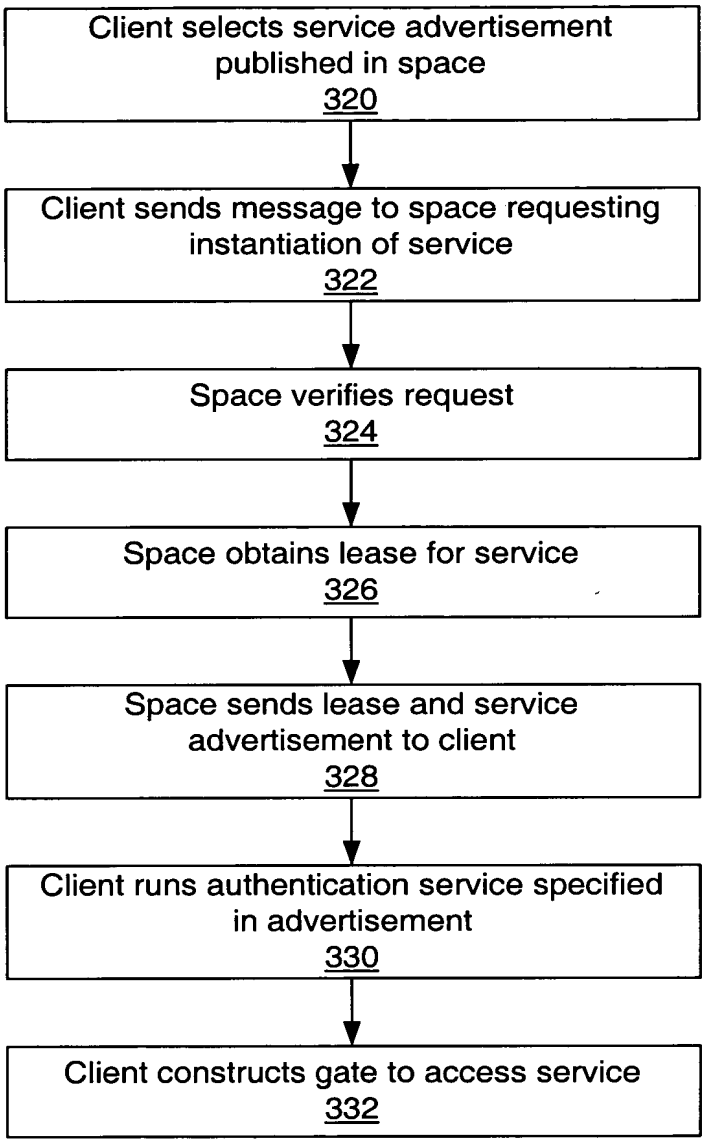

Client selects service advertisement published in space
320
Client sends message to space requesting instantiation of service
322
Space verifies request
324
Space obtains lease for service
326
Space sends lease and service advertisement to client
328
Client runs authentication service specified in advertisement
330
Client constructs gate to access service
332

Fig. 22

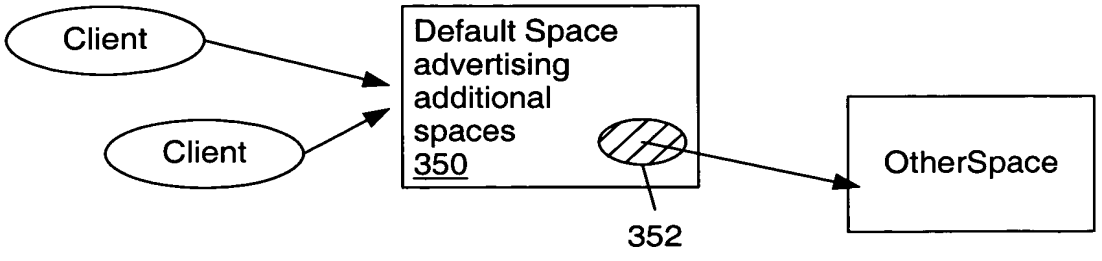

Client
Client
Default Space advertising additional spaces
350
352
OtherSpace

Fig. 23

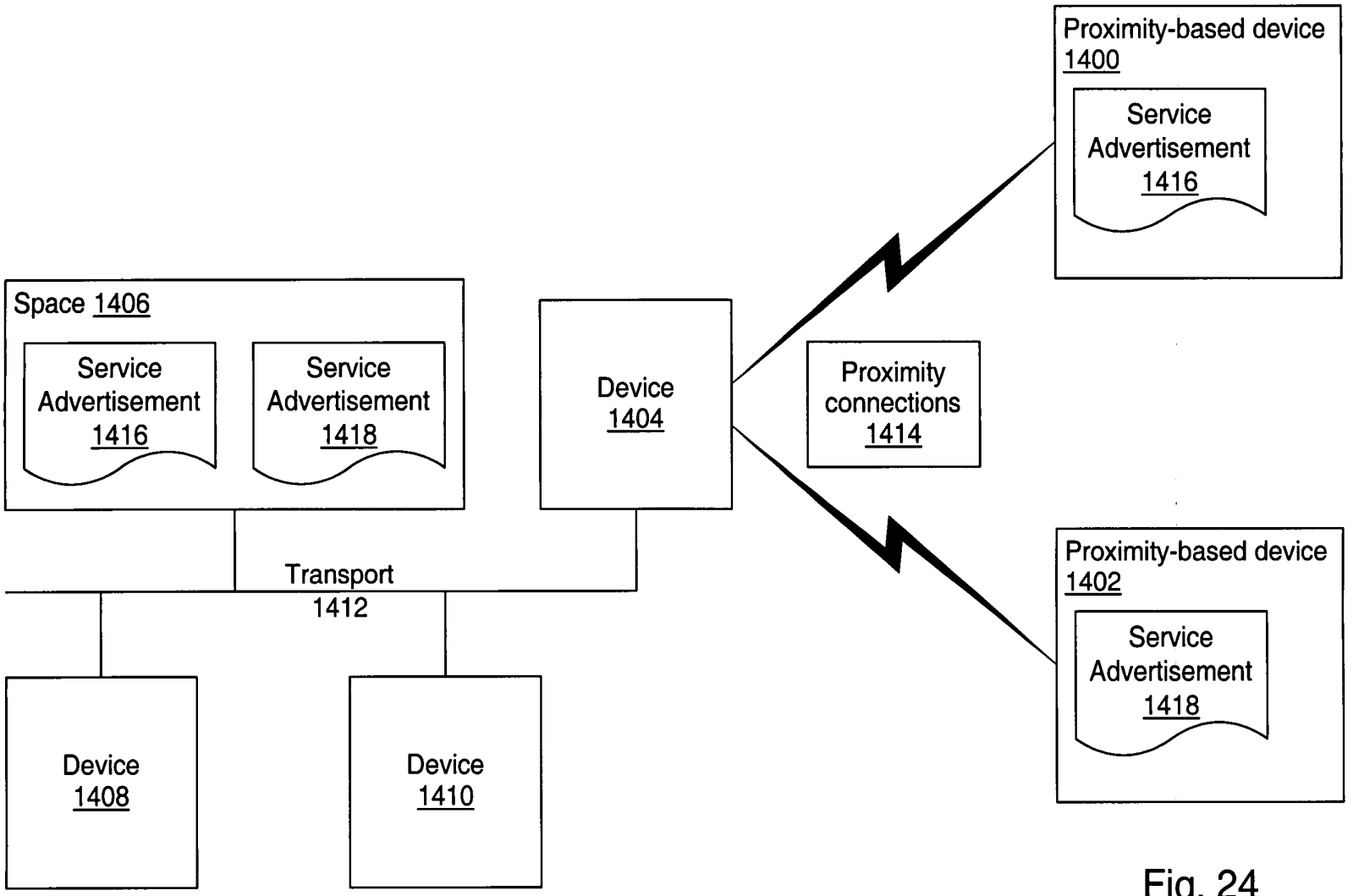

Proximity-based device
1400
Service
Advertisement
1416
Space 1406
Service
Advertisement
1416
Service
Advertisement
1418
Device
1404
Proximity
connections
1414
Transport
1412
Proximity-based device
1402
Service
Advertisement
1418
Device
1408
Device
1410

Fig. 24

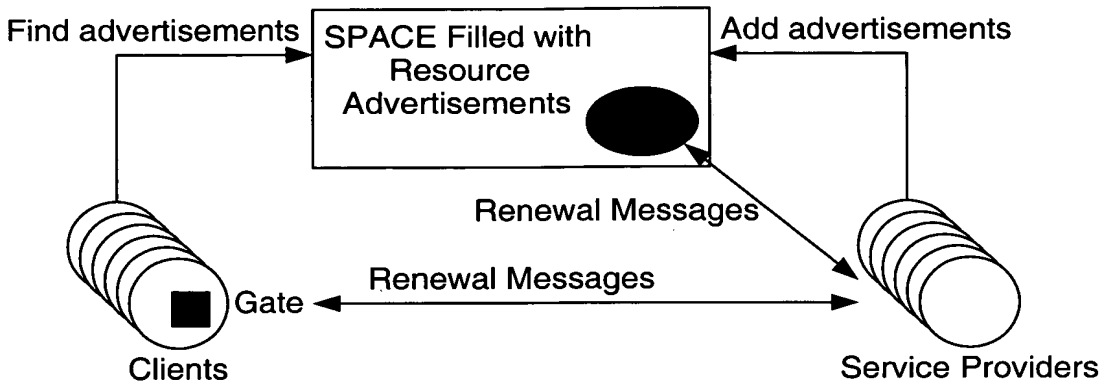

Find advertisements
SPACE Filled with Resource Advertisements
Add advertisements
Renewal Messages
Renewal Messages
Gate
Clients
Service Providers

Fig. 25

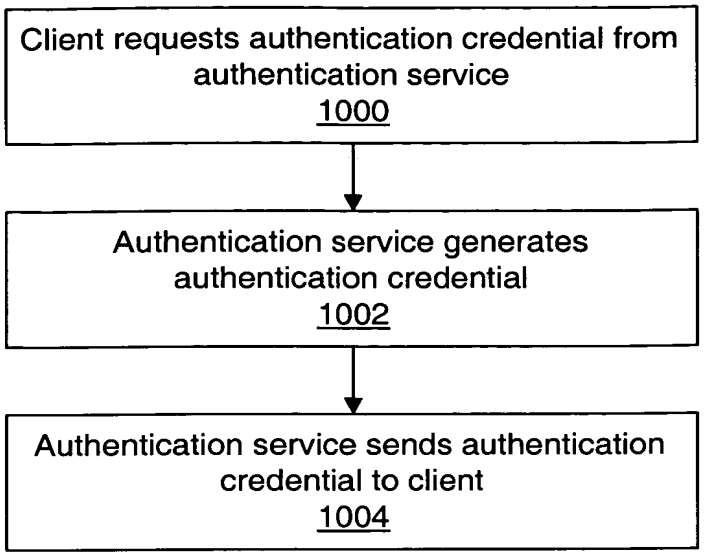


FIG. 26a

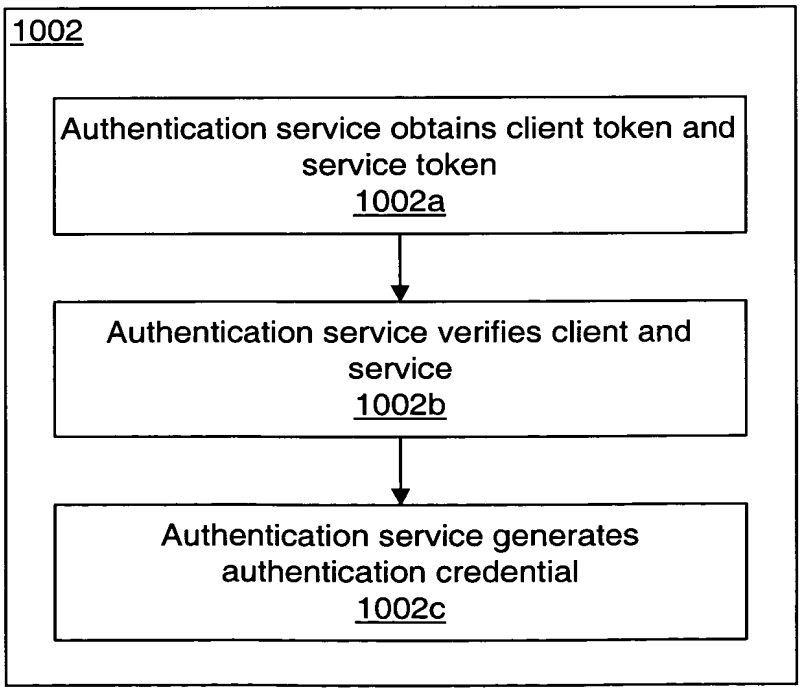


FIG. 26b

00ST60' E95E3960

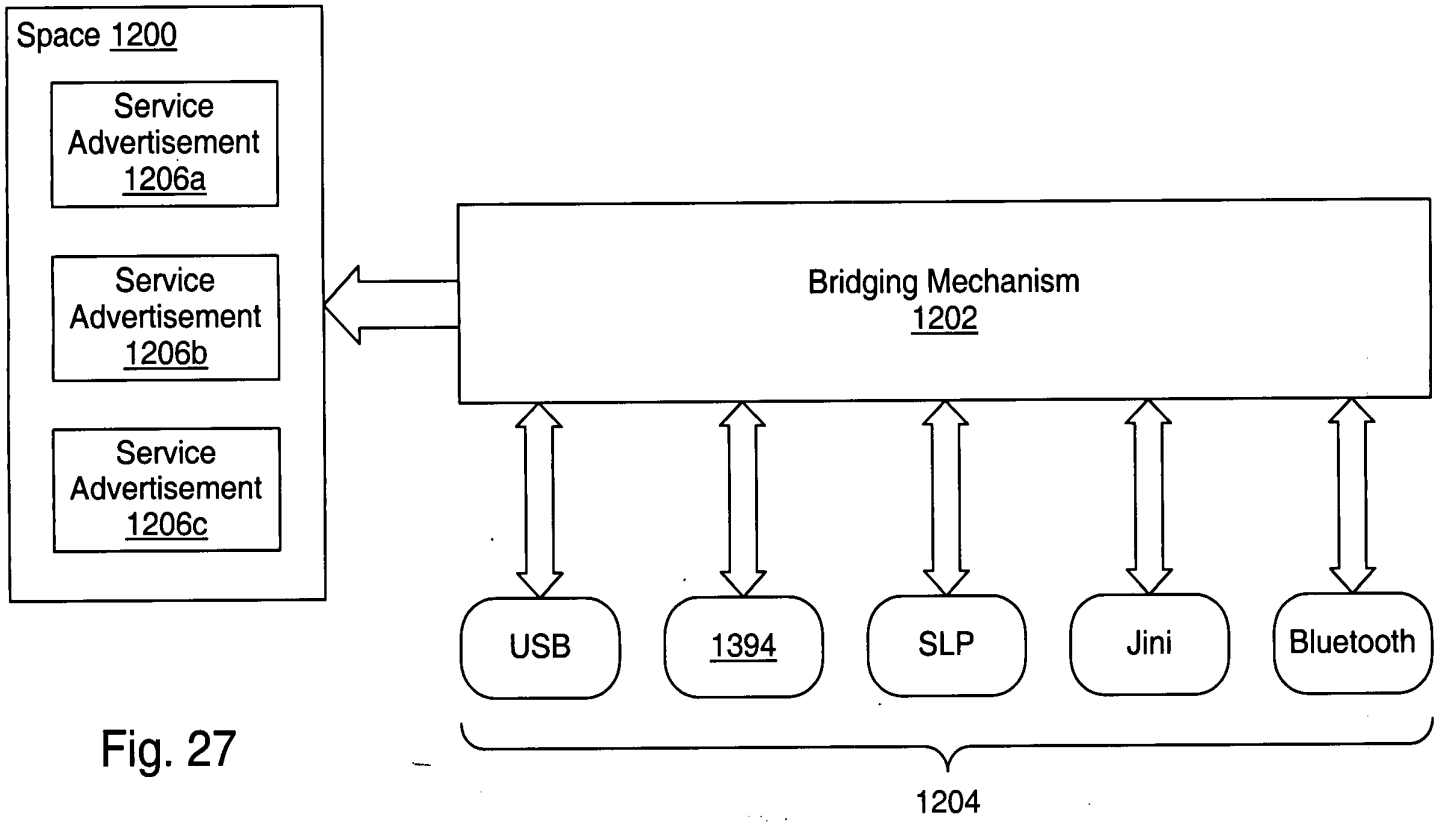


Fig. 27

005760"E95E9960

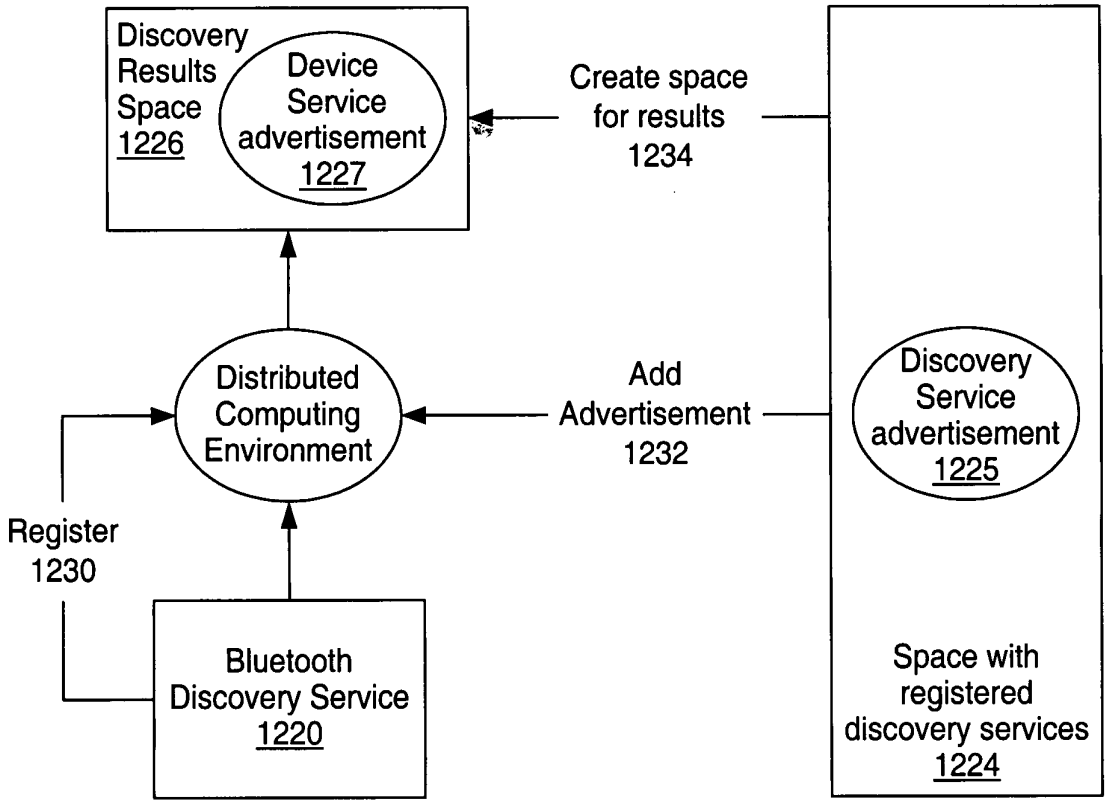
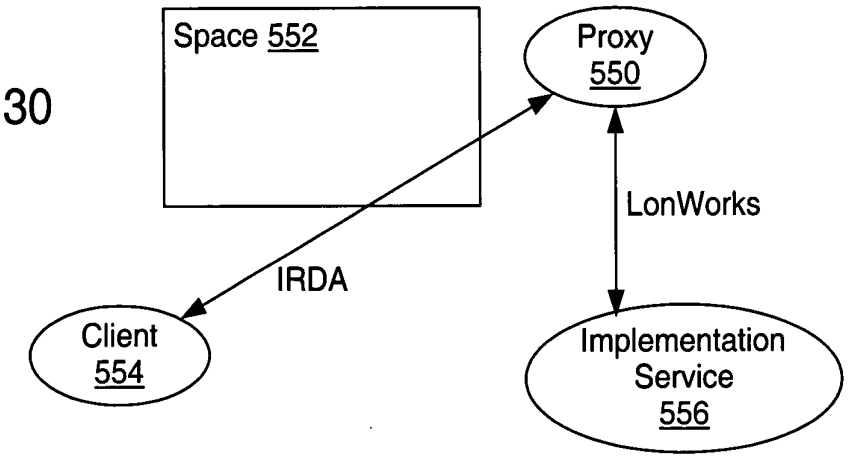


Fig. 28

DOST60"E95E9960

Fig. 30



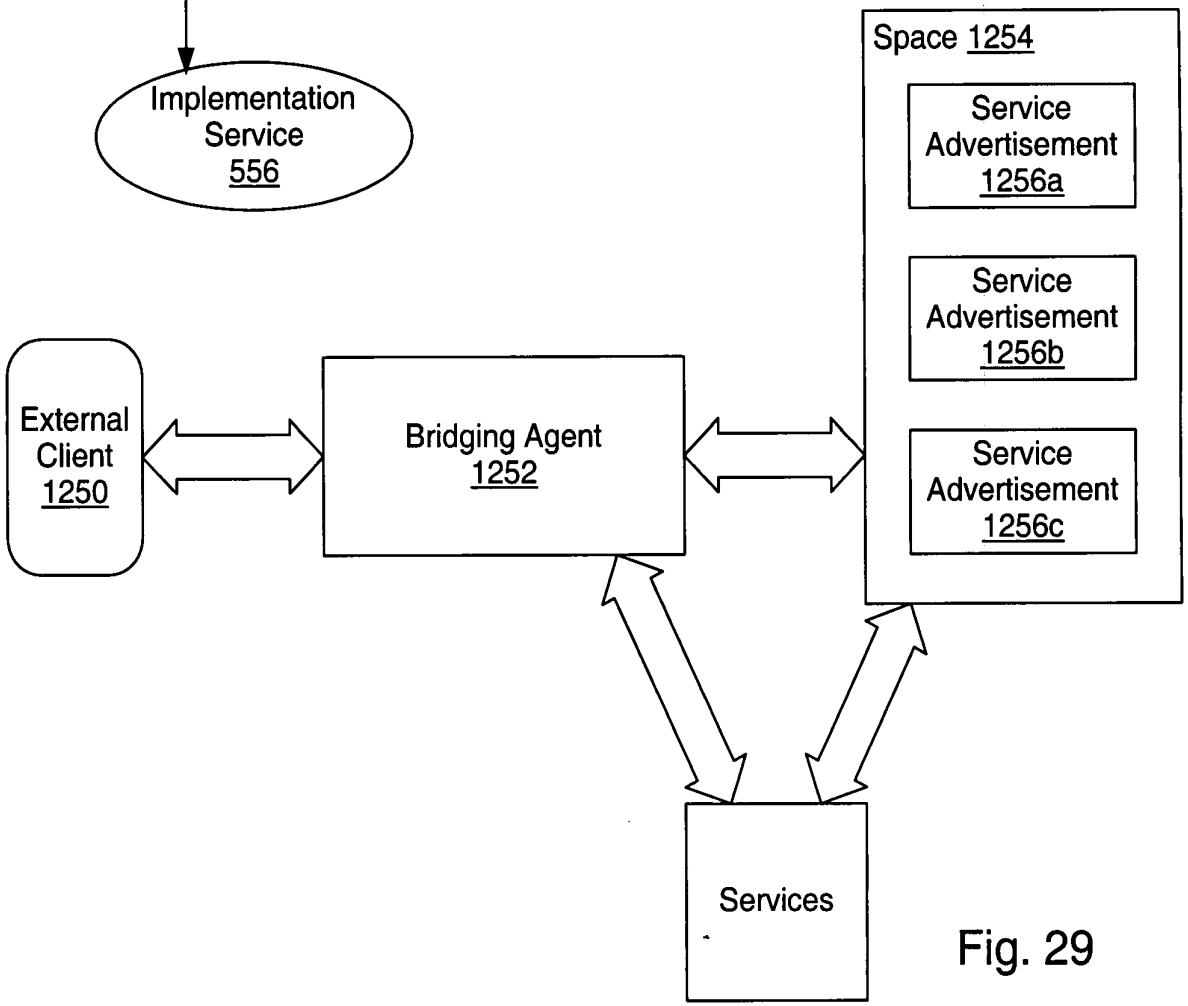


Fig. 29

005760"E95E9960

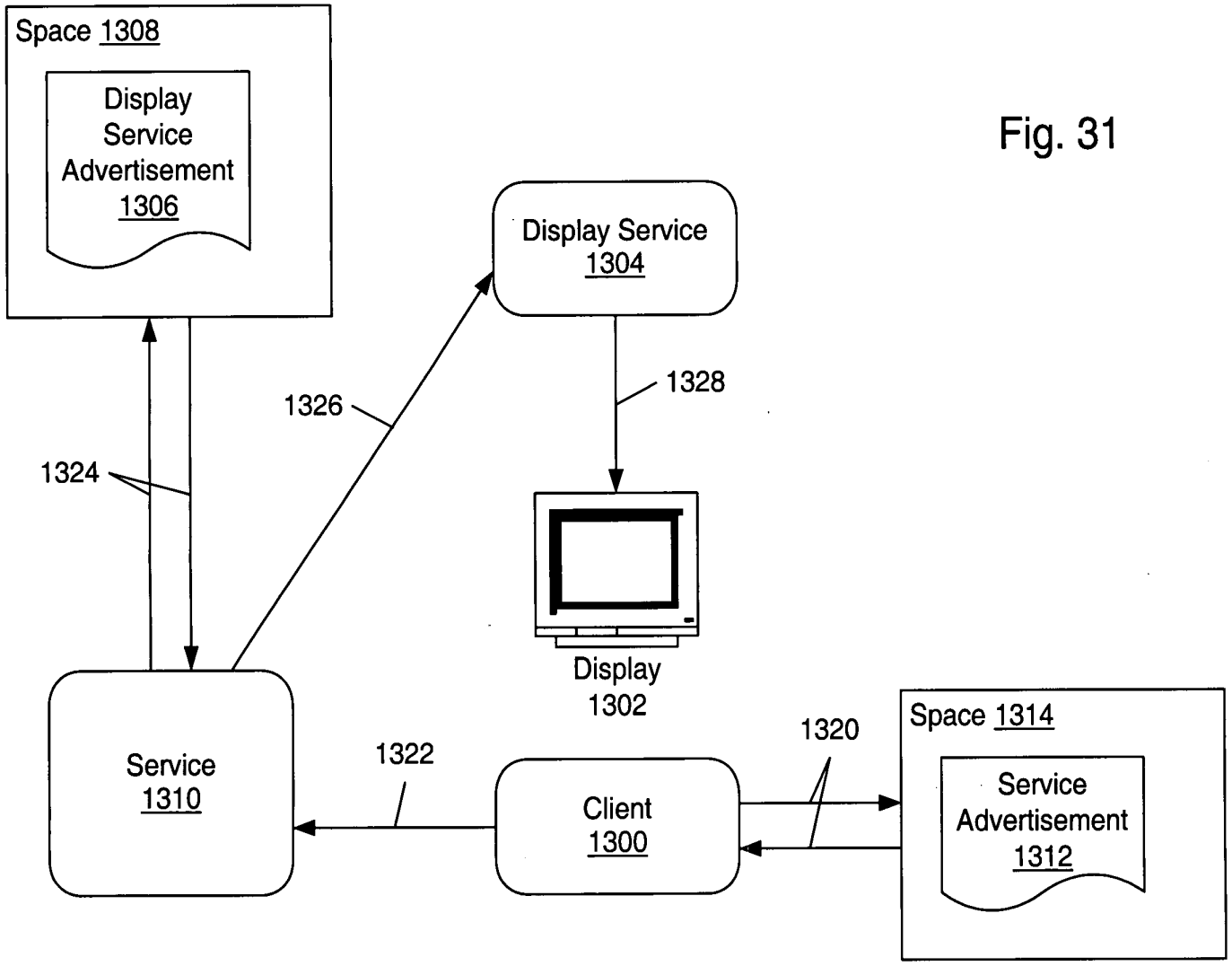


Fig. 31

005760"29529960

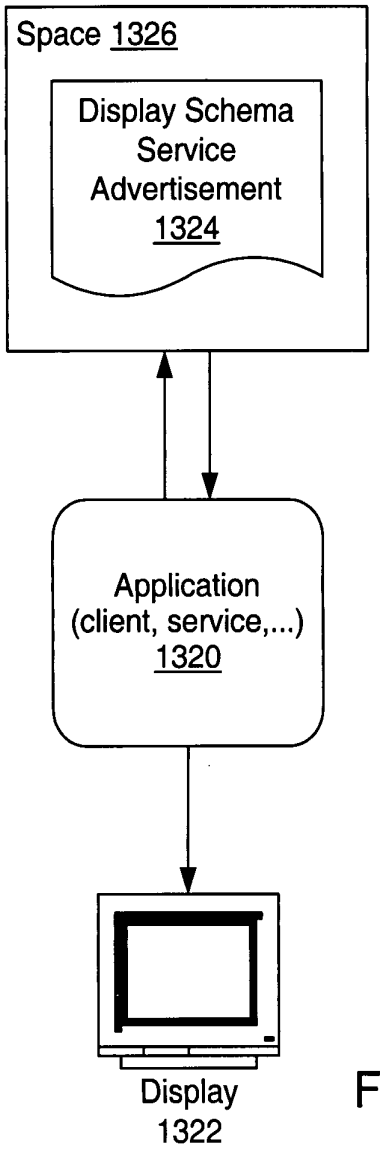


Fig. 32A

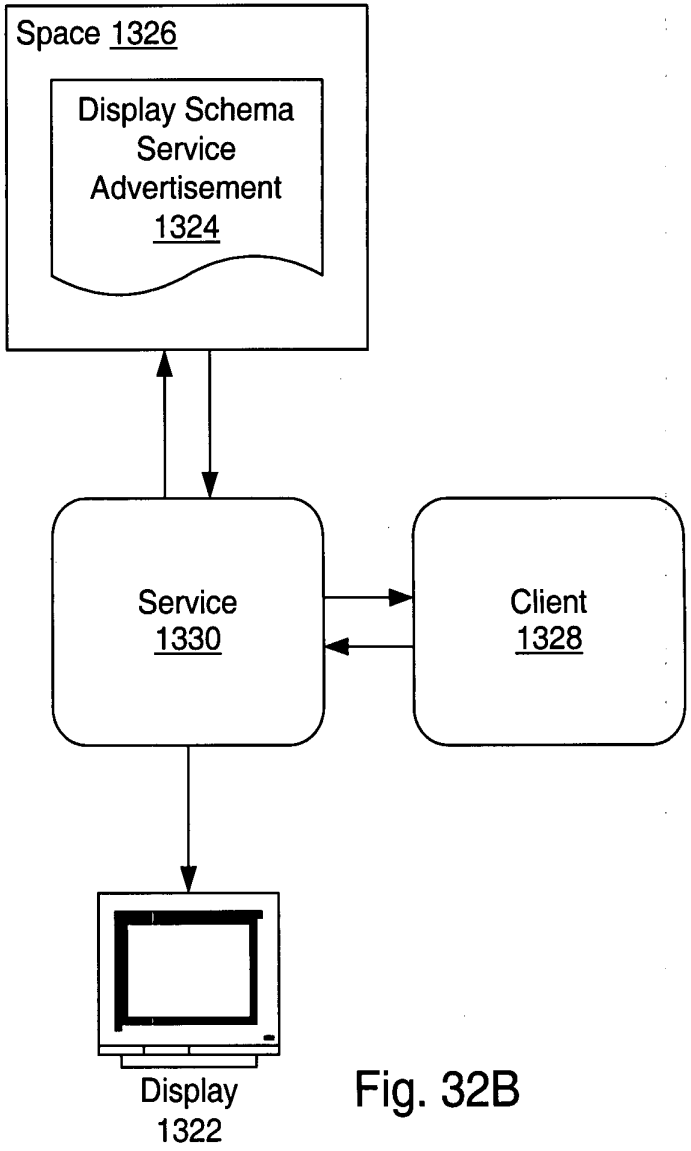


Fig. 32B

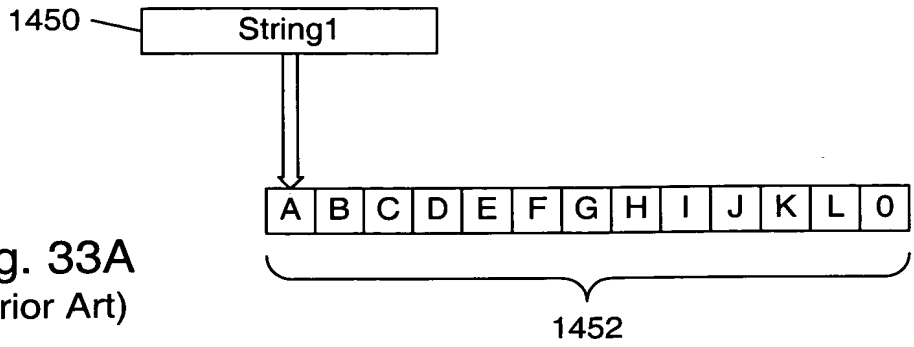


Fig. 33A
(Prior Art)

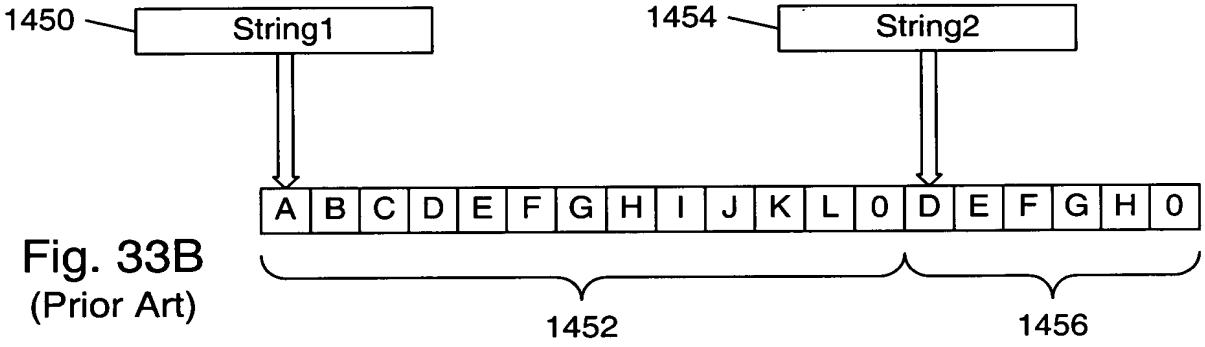


Fig. 33B
(Prior Art)

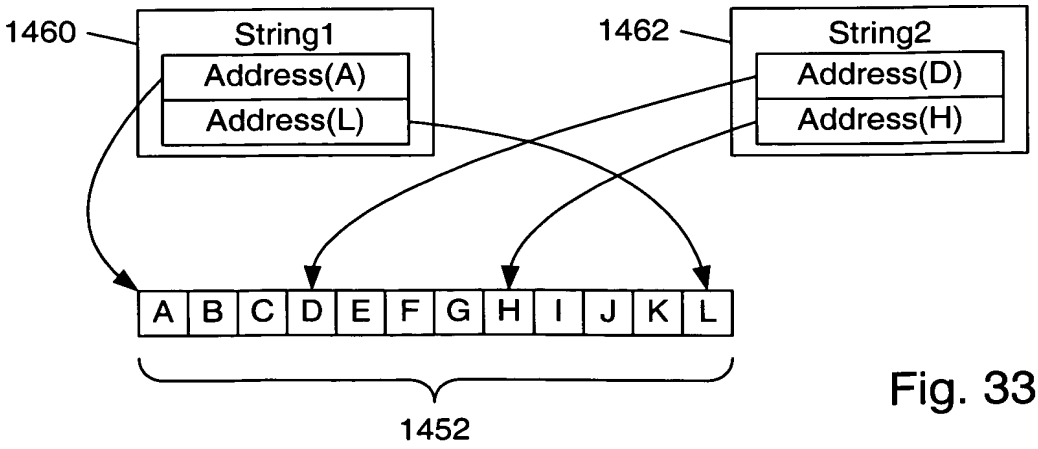


Fig. 33C

Docket.com

005760 "29529960

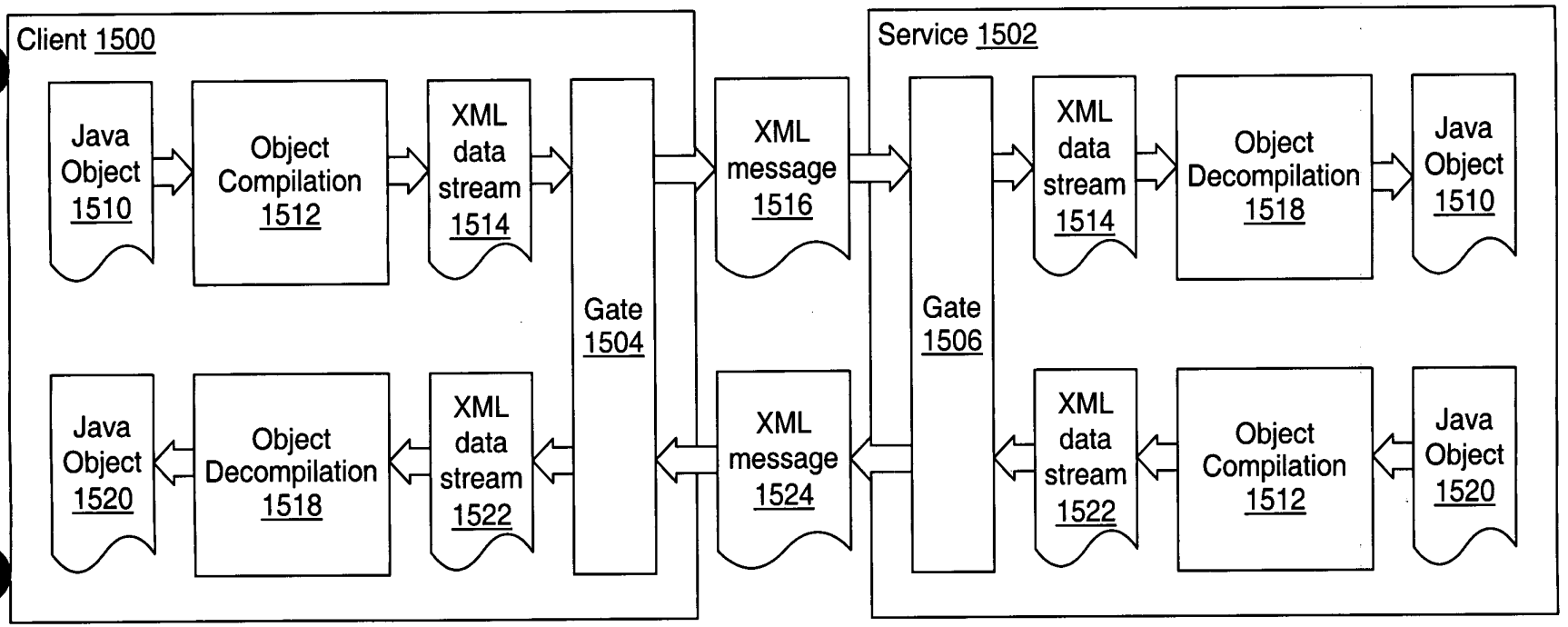


Fig. 34

005760"E95E9960

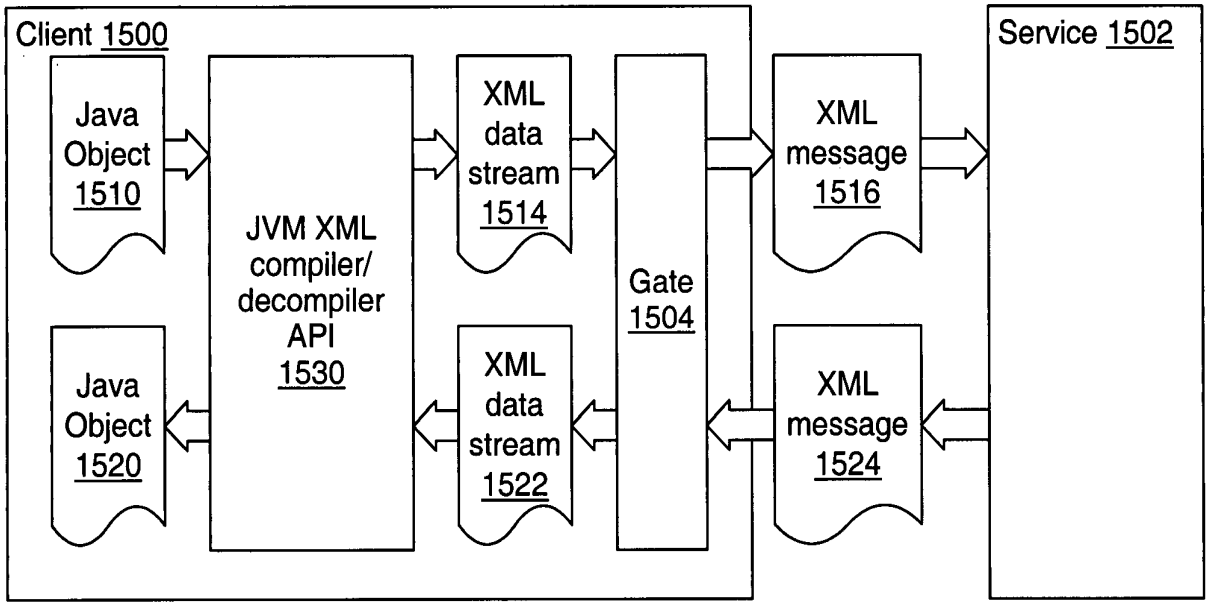


Fig. 35a

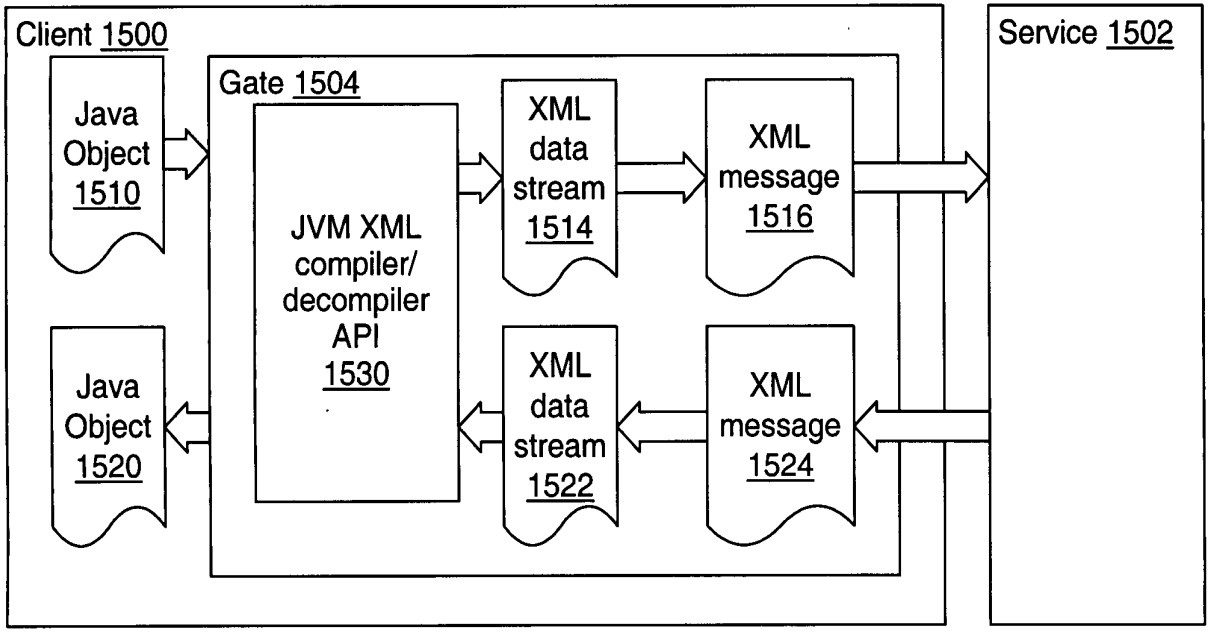


Fig. 35b

005160 "E9529960

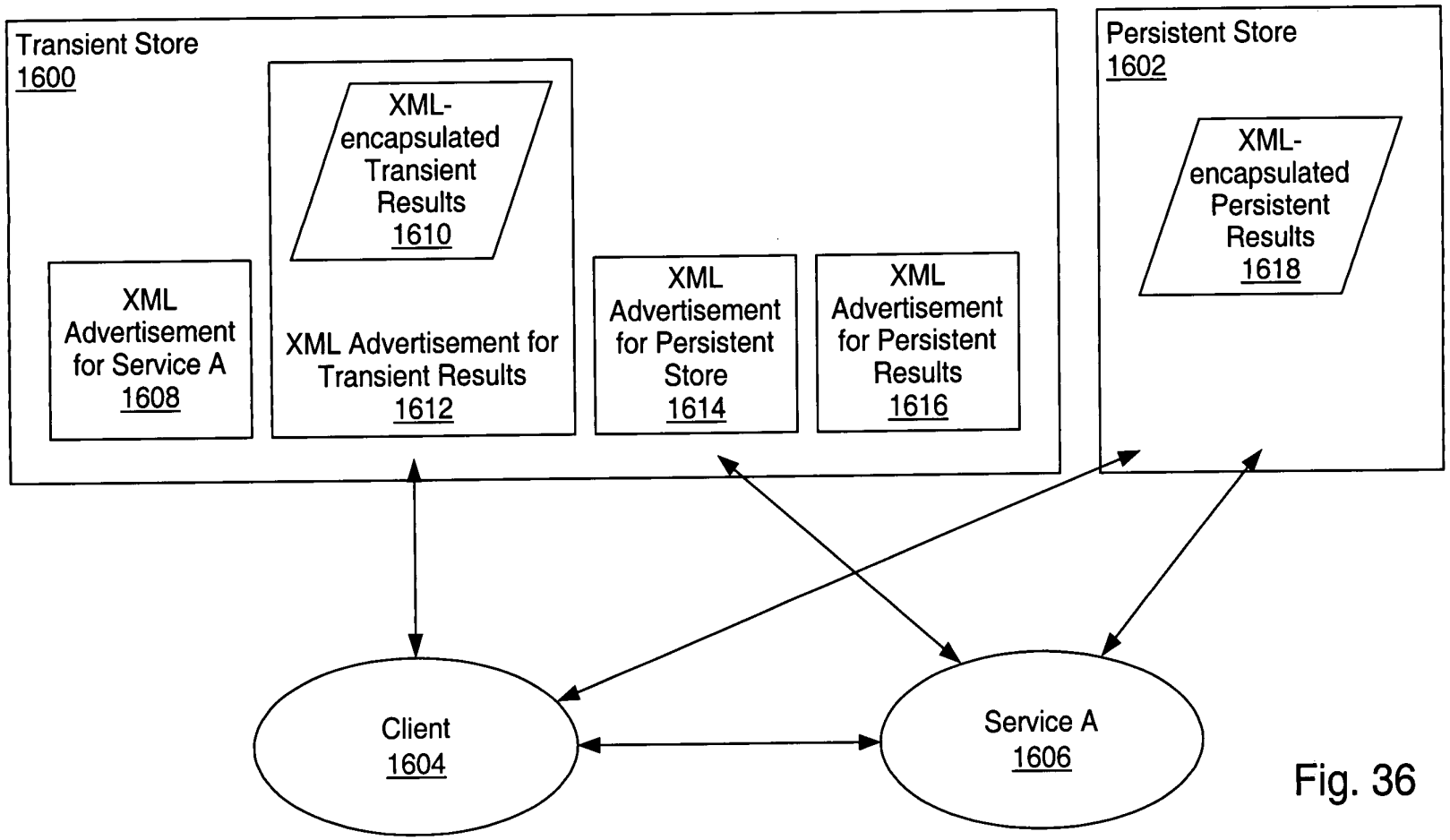


Fig. 36

005760 E95E968

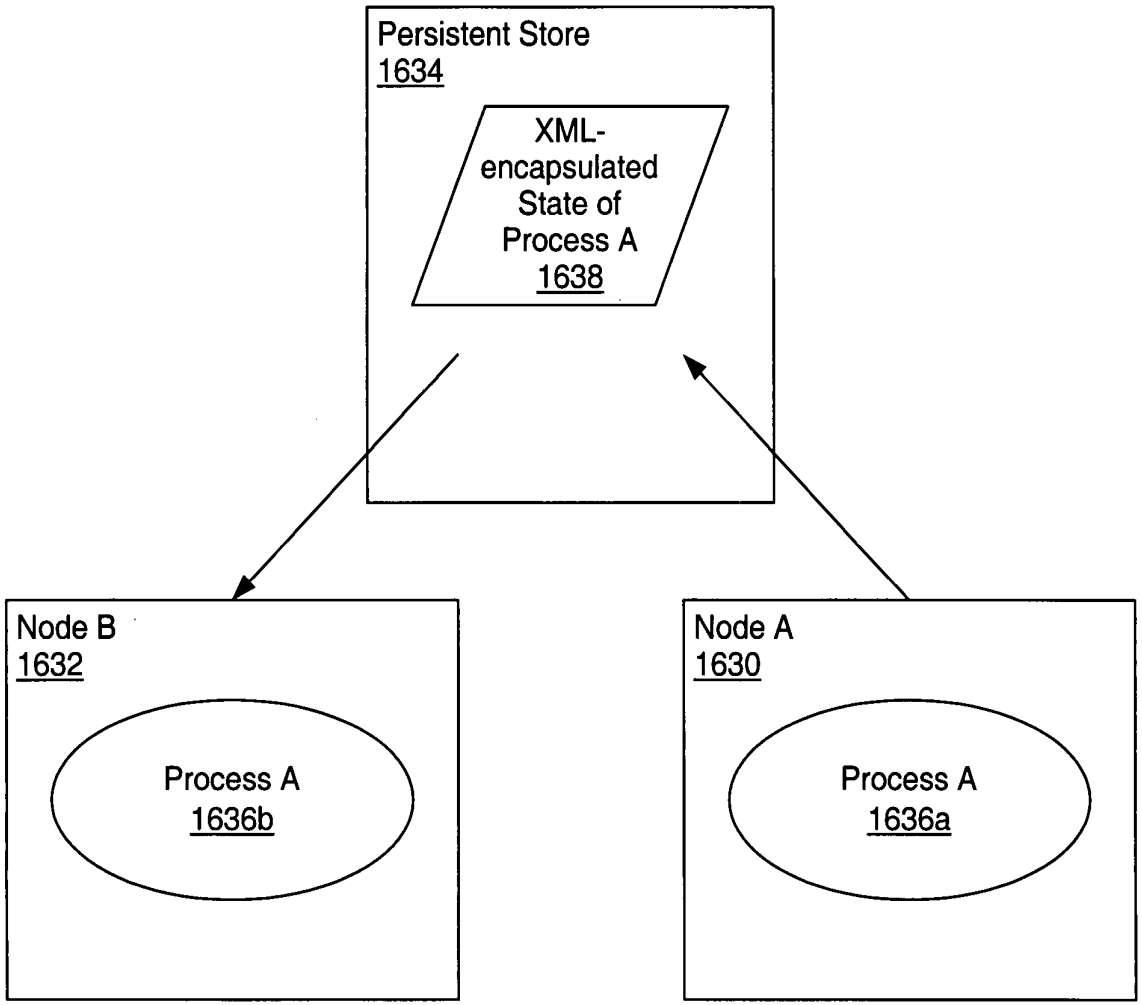


Fig. 37

005T60*E95E9960

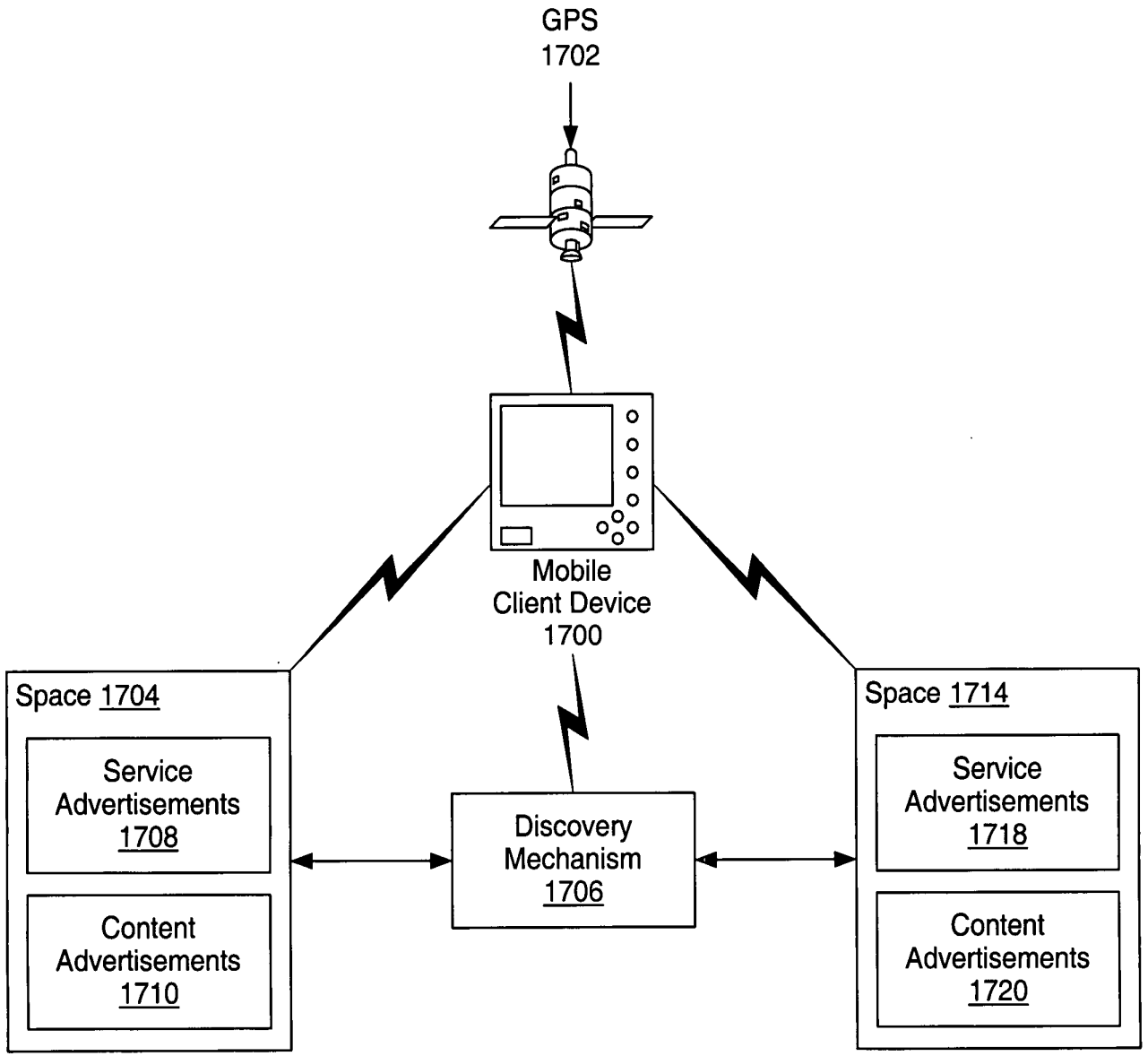


Fig. 38

00S760 E95E960

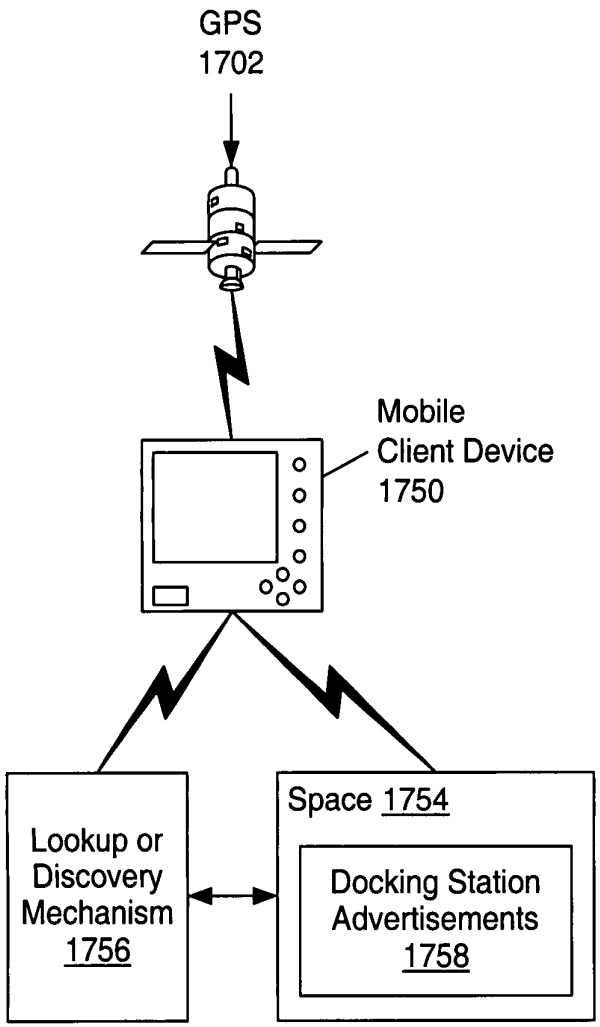


Fig. 39a

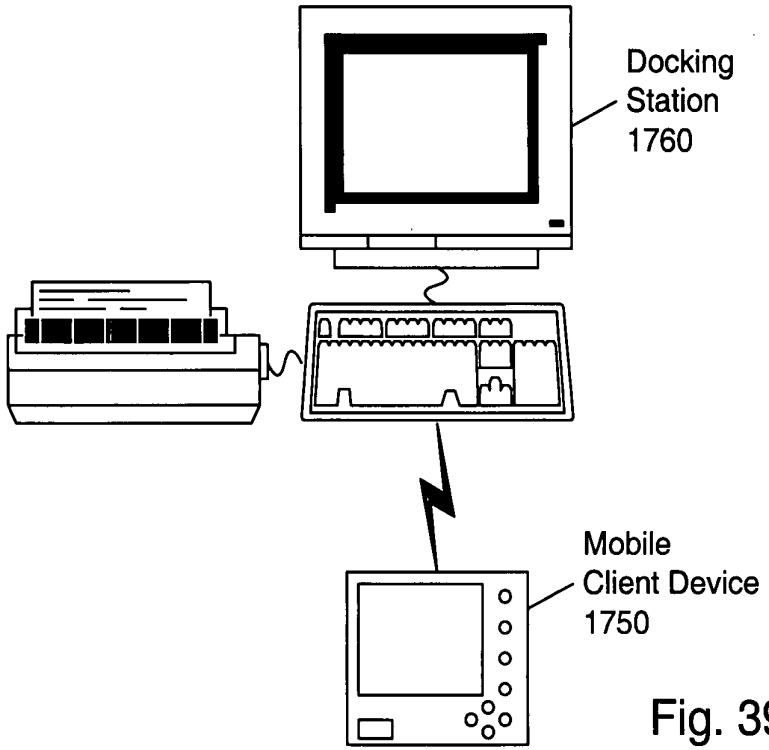


Fig. 39b

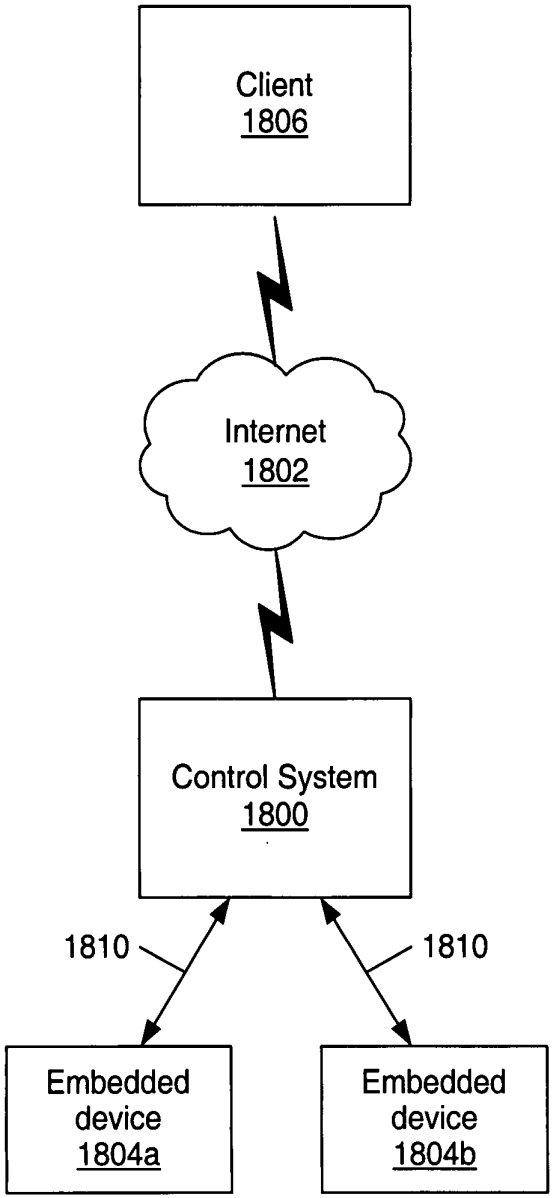


Fig. 40a

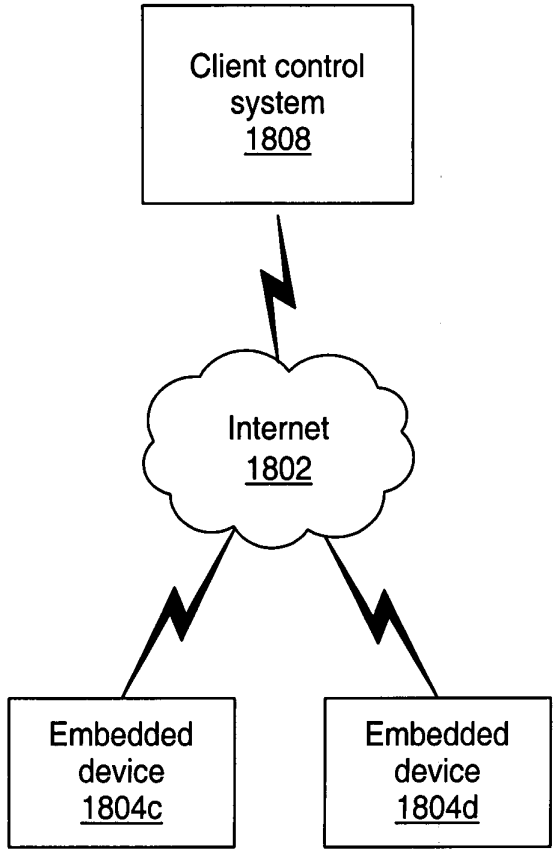


Fig. 40b

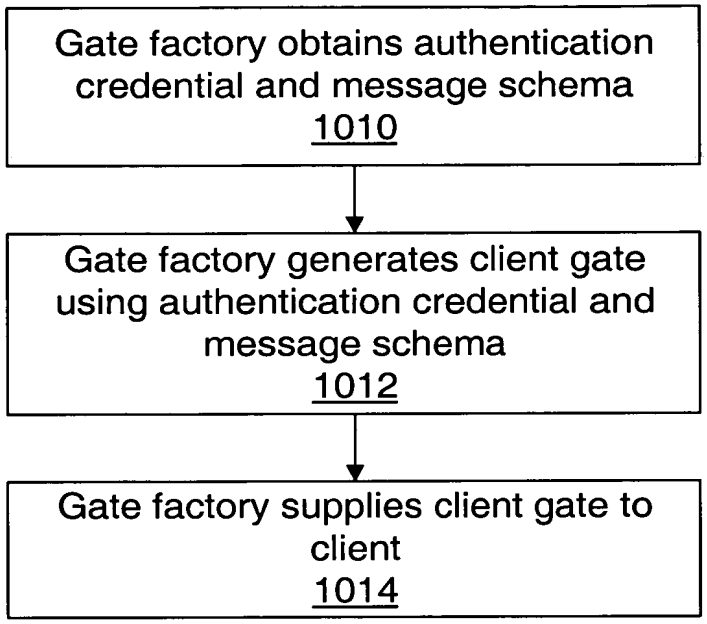

Gate factory obtains authentication credential and message schema
1010
Gate factory generates client gate using authentication credential and message schema
1012
Gate factory supplies client gate to client
1014

FIG. 41

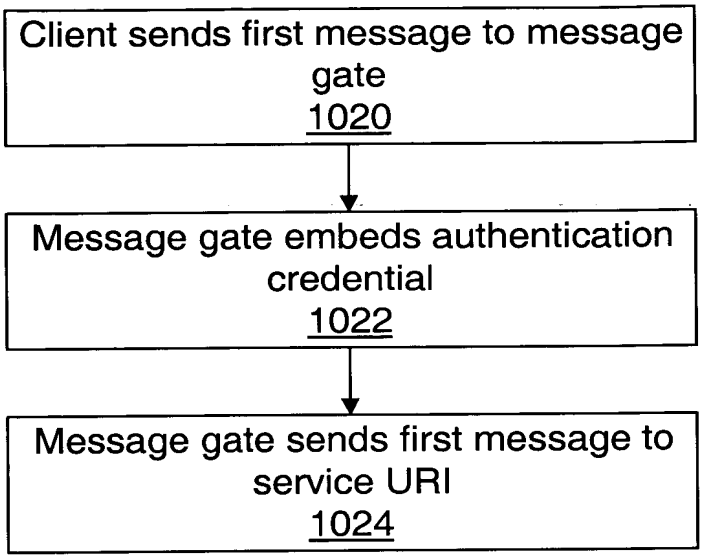


FIG. 42a

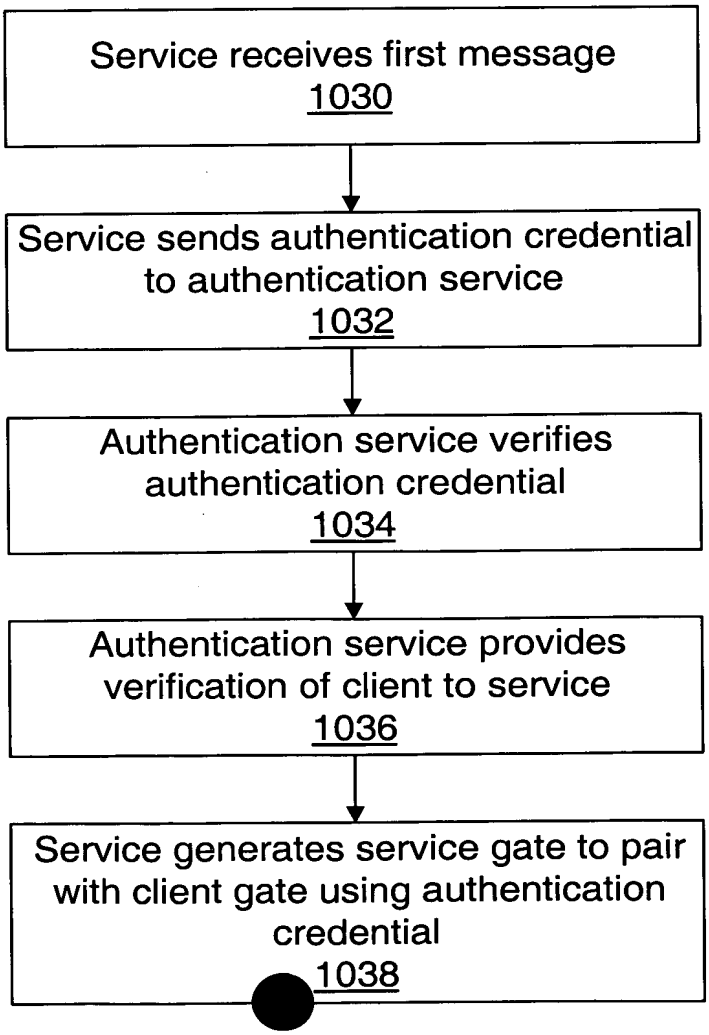


FIG. 42b

Docket No. 50277-2000

DOCKET NO. 2656.0

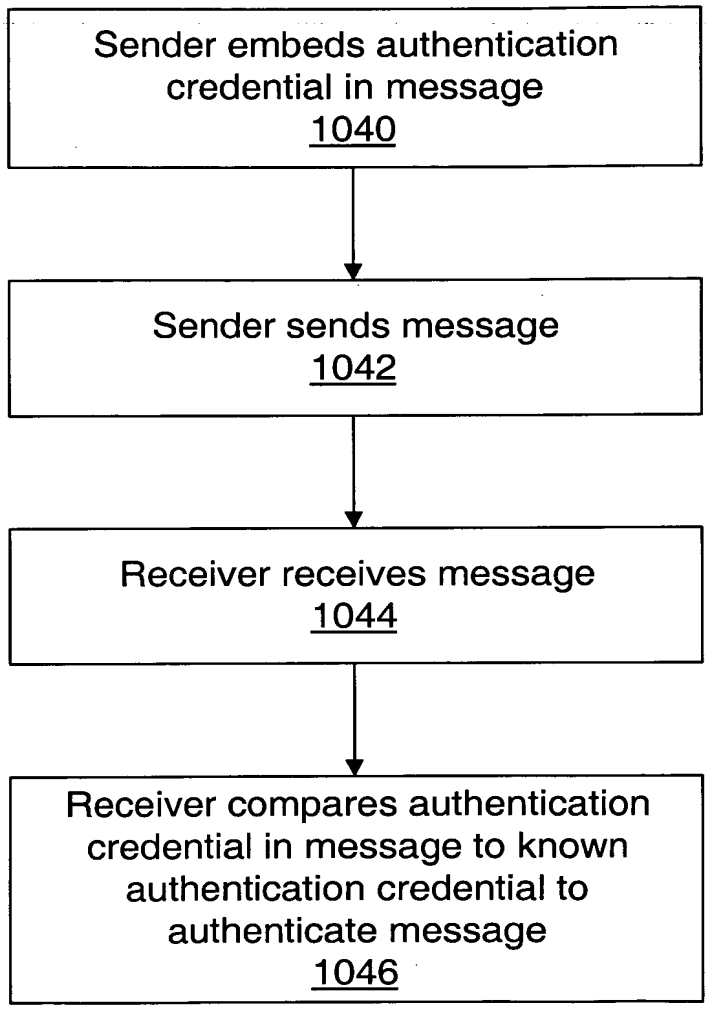


FIG. 42c

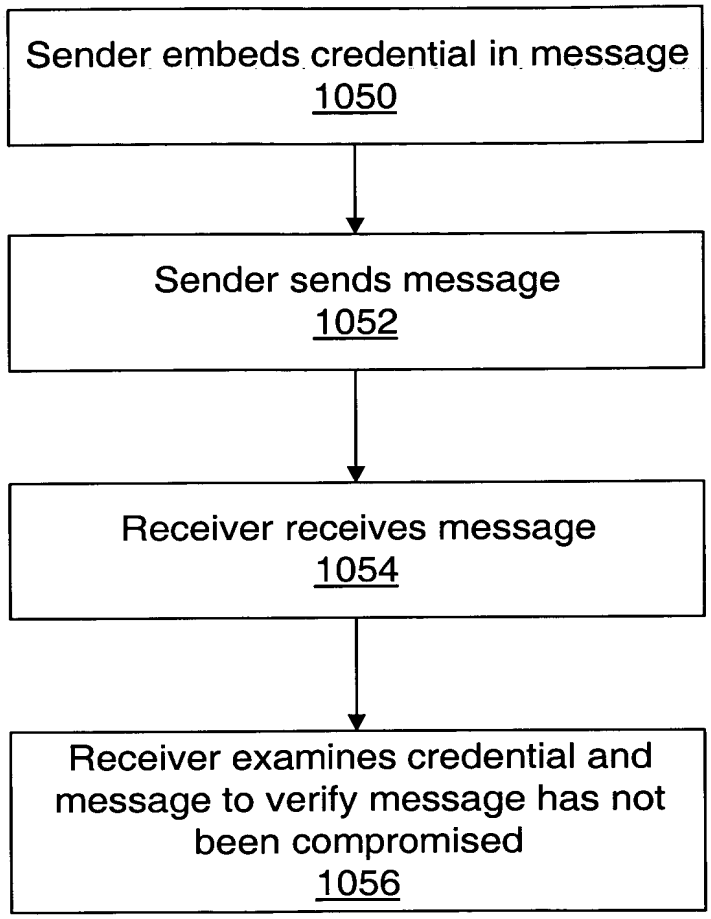

Sender embeds credential in message
1050
Sender sends message
1052
Receiver receives message
1054
Receiver examines credential and message to verify message has not been compromised
1056

FIG. 43

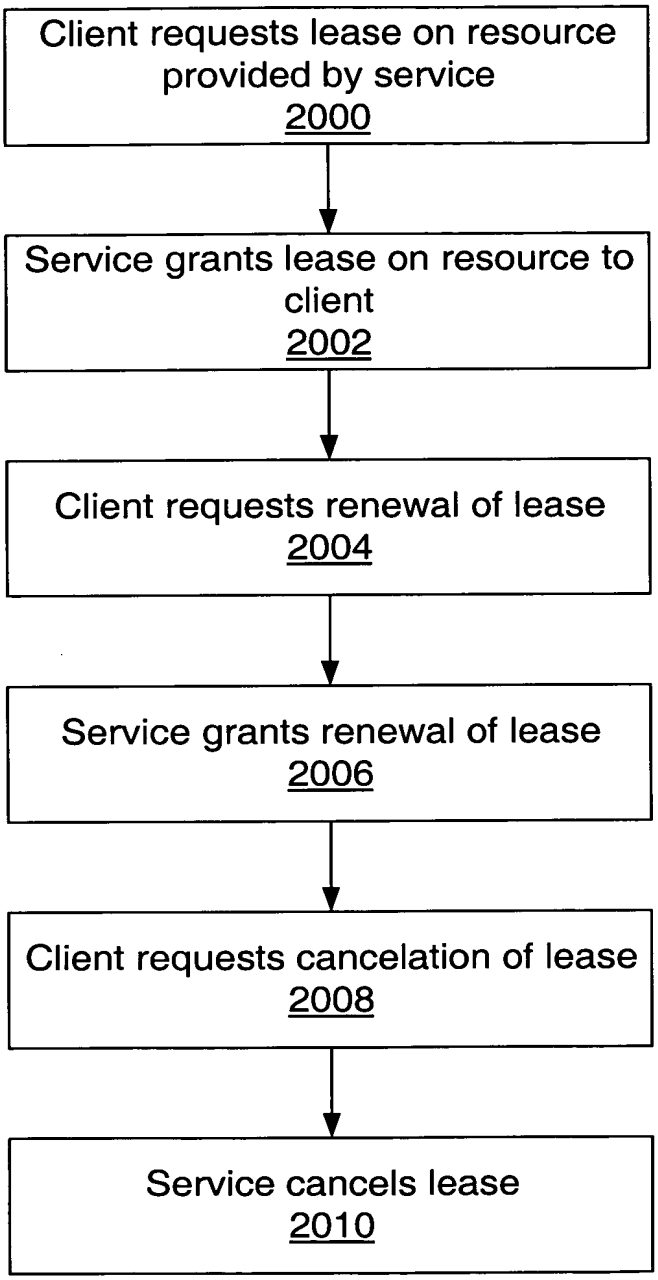

Client requests lease on resource provided by service
2000
Service grants lease on resource to client
2002
Client requests renewal of lease
2004
Service grants renewal of lease
2006
Client requests cancelation of lease
2008
Service cancels lease
2010

FIG. 44

0054-2356.0

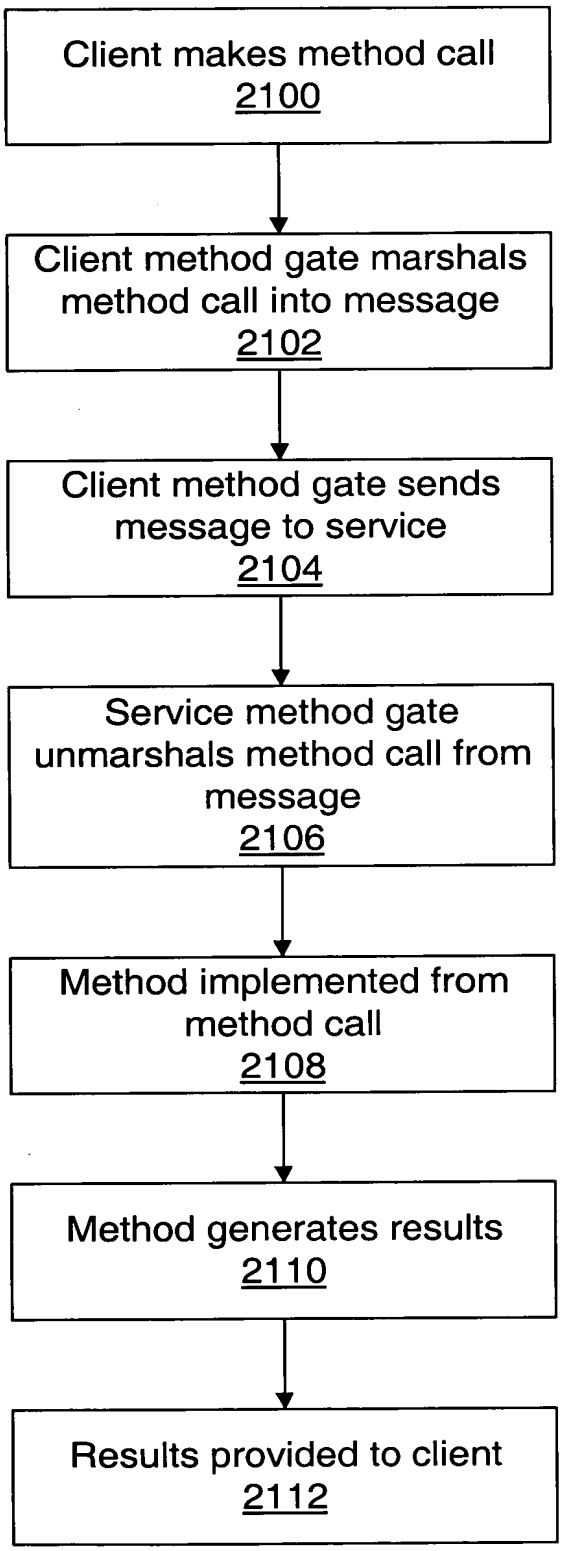


Figure 45a

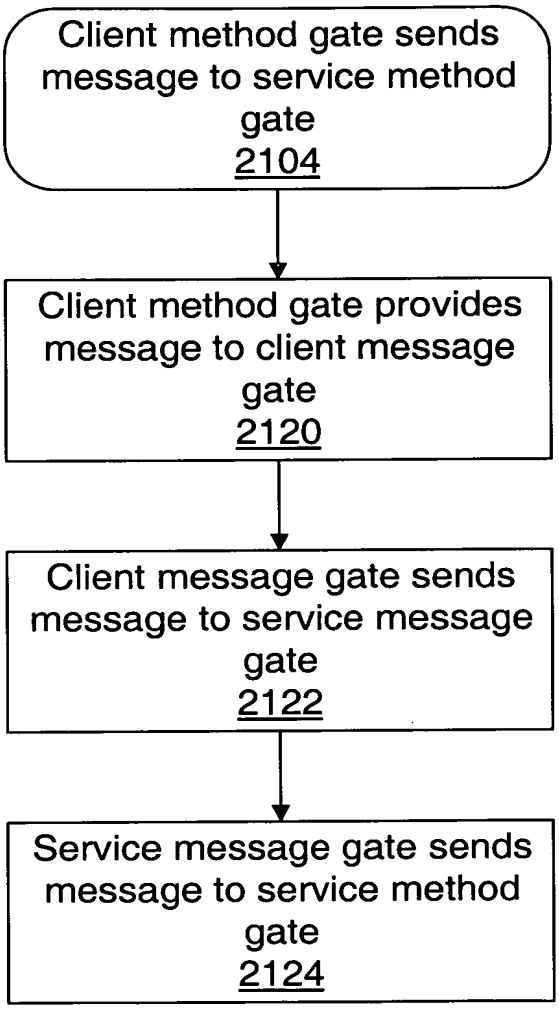


Figure 45b

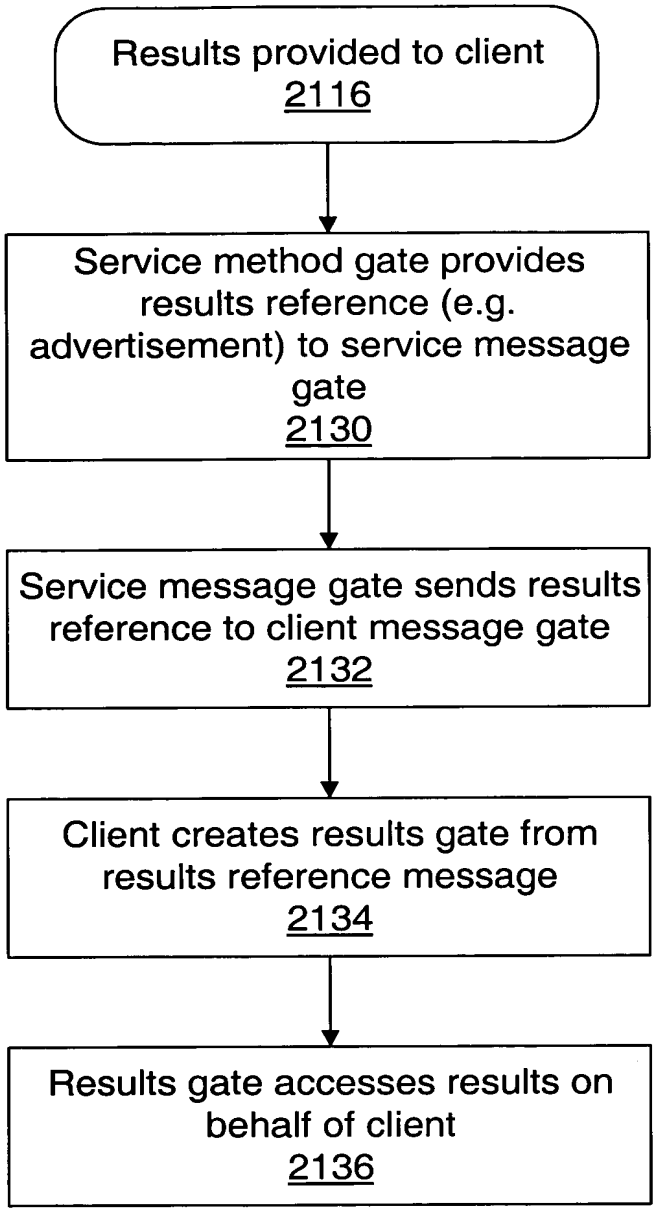


Figure 45c

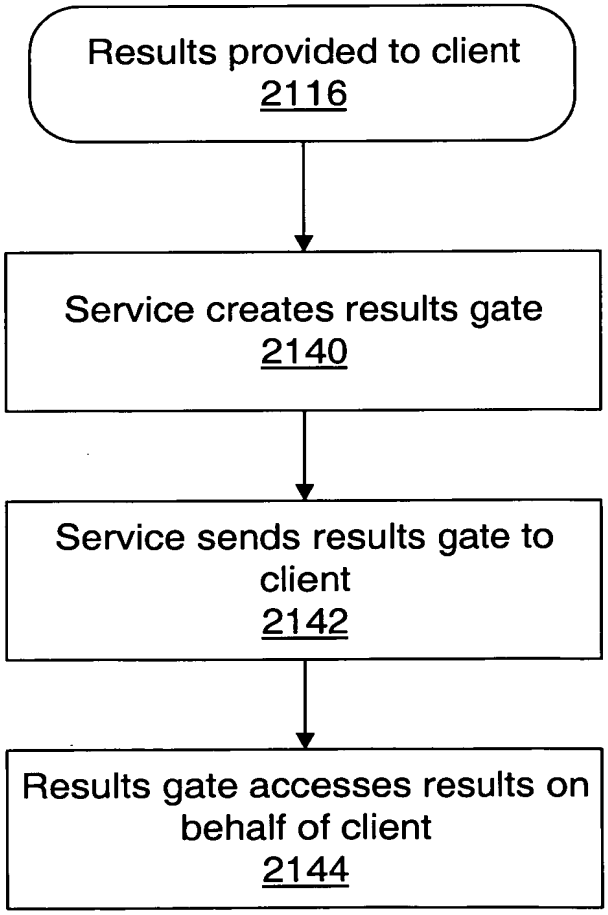


Figure 45d

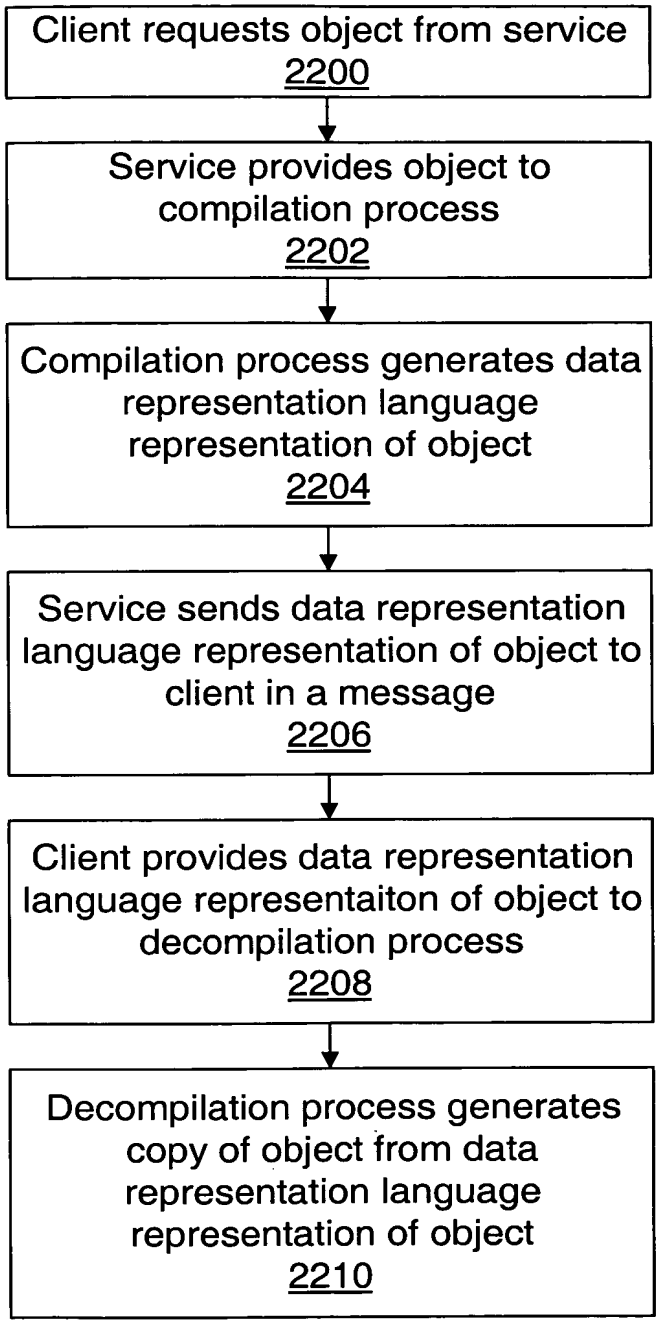

Client requests object from service
2200
Service provides object to compilation process
2202
Compilation process generates data representation language representation of object
2204
Service sends data representation language representation of object to client in a message
2206
Client provides data representation language representaiton of object to decompilation process
2208
Decompilation process generates copy of object from data representation language representation of object
2210

Figure 46

DOCKET NO. 50277-2050

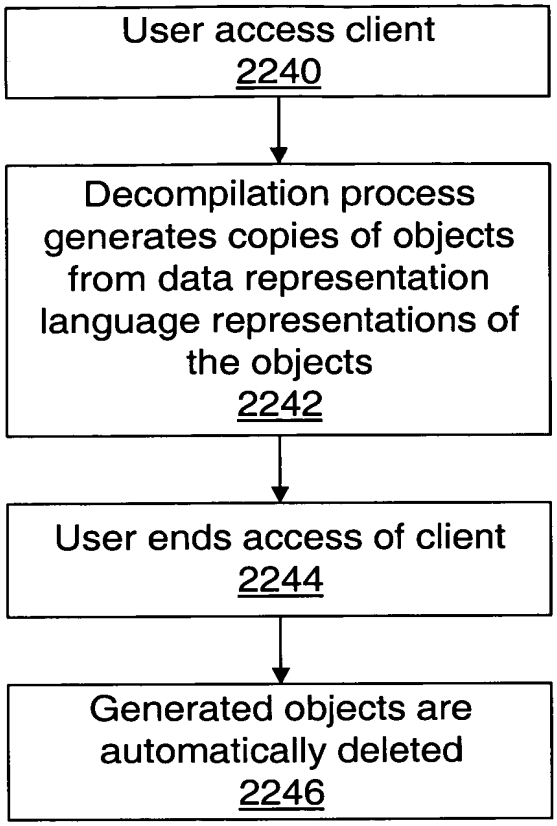


Figure 47

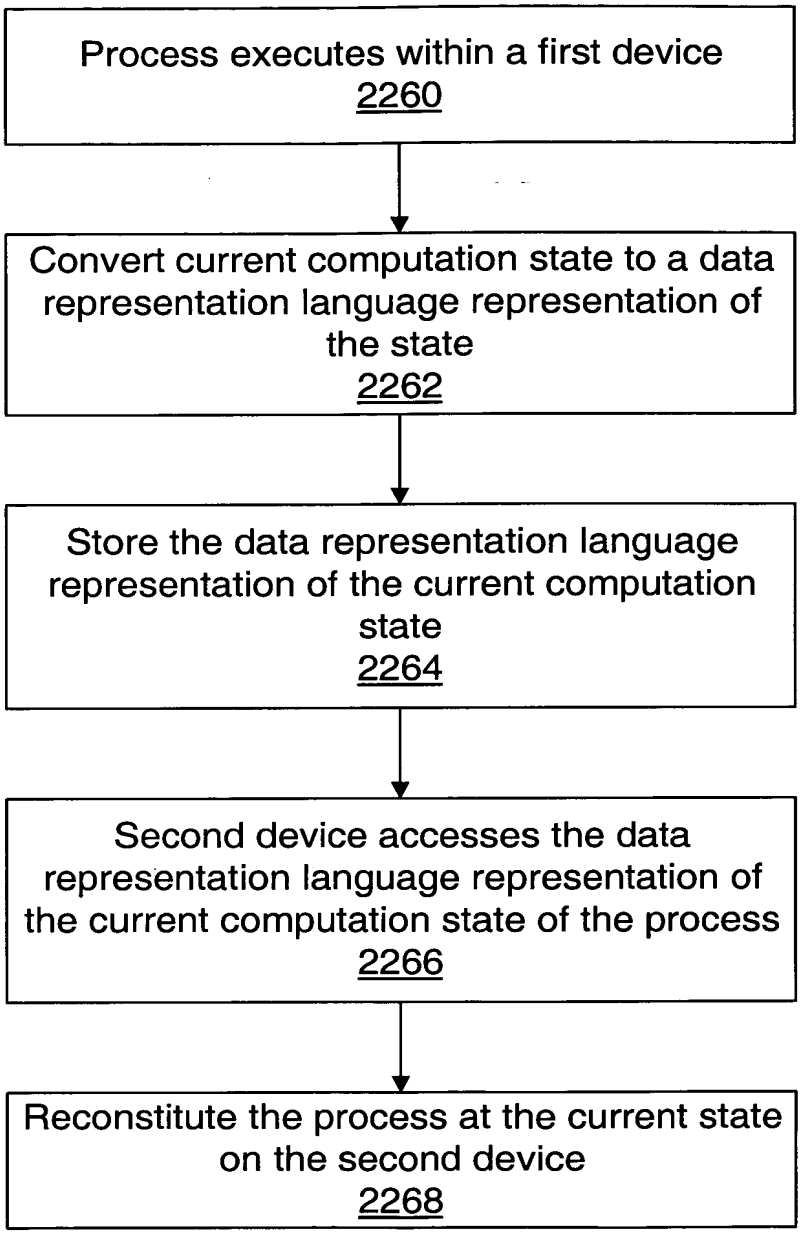

Process executes within a first device
2260
Convert current computation state to a data representation language representation of the state
2262
Store the data representation language representation of the current computation state
2264
Second device accesses the data representation language representation of the current computation state of the process
2266
Reconstitute the process at the current state on the second device
2268

Figure 48